IdeaPad S9e, S10e, and S10
Hardware Maintenance Manual

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Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 131.

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Contents

About this manual

This manual contains service and reference information for the following IdeaPad™ products.

IdeaPad S9e and S10e
MT 4068 and 4187

IdeaPad S10
MT 4329 and 4333

Use this manual along with the advanced diagnostic tests to troubleshoot problems.

The manual is divided into sections as follows:

- The common sections provide general information, guidelines, and safety information required in servicing computers.
- The product-specific section includes service, reference, and product-specific parts information.

Important:
This manual is intended only for trained servicers who are familiar with IdeaPad products. Use this manual along with the advanced diagnostic tests to troubleshoot problems effectively.

Before servicing an IdeaPad product, be sure to read all the information under “Safety information” on page 1 and “Important service information” on page 17.

Safety information

This chapter presents following safety information that you need to be familiar with before you service a IdeaPad computer.

General safety

Follow these rules to ensure general safety:

- Observe good housekeeping in the area of the machines during and after maintenance.
- When lifting any heavy object:
  1. Make sure that you can stand safely without slipping.
  2. Distribute the weight of the object equally between your feet.
  3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift.
  4. Lift by standing or by pushing up with your leg muscles; this action removes the strain from the muscles in your back. *Do not attempt to lift any object that weighs more than 16 kg (35 lb) or that you think is too heavy for you.*
- Do not perform any action that causes hazards to the customer, or that makes the equipment unsafe.
- Before you start the machine, make sure that other service representatives and the customer's personnel are not in a hazardous position.
- Place removed covers and other parts in a safe place, away from all personnel, while you are servicing the machine.
- Keep your toolcase away from walk areas so that other people will not trip over it.
- Do not wear loose clothing that can be trapped in the moving parts of a machine. Make sure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing or fasten it with a nonconductive clip, about 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

  Attention: Metal objects are good electrical conductors.
- Wear safety glasses when you are hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that might be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.
- Fan louvers on the machine help to prevent overheating of internal components. Do not obstruct fan louvers or cover them with labels or stickers.

Electrical safety

Observe the following rules when working on electrical equipment.

> **Important:**
> Use only approved tools and test equipment. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.
>
> Many customers have, near their equipment, rubber floor mats that contain small conductive fibers to decrease electrostatic discharges. Do not use this type of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting switch, or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near equipment that has hazardous voltages.
- Disconnect all power before:
  - Performing a mechanical inspection
  - Working near power supplies
  - Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine, and to lock the wall box in the off position.
- If you need to work on a machine that has *exposed* electrical circuits, observe the following precautions:
  - Ensure that another person, familiar with the power-off controls, is near you.

    Attention: Another person must be there to switch off the power, if necessary.
  - Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.

    Attention: An electrical shock can occur only when there is a complete circuit. By observing the above rule, you may prevent a current from passing through your body.
  - When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
  - Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.

  Observe the special safety precautions when you work with very high voltages; Instructions for these precautions are in the safety sections of maintenance information. Use extreme care when measuring high voltages.
- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- *Never assume* that power has been disconnected from a circuit. First, *check* that it has been powered off.
- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.

- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- Do not service the following parts *with the power on* when they are removed from their normal operating places in a machine:
  - Power supply units
  - Pumps
  - Blowers and fans
  - Motor generators

  and similar units. (This practice ensures correct grounding of the units.)
- If an electrical accident occurs:
  - Use caution; do not become a victim yourself.
  - Switch off power.
  - Send another person to get medical aid.

Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potentially unsafe conditions. As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards due to attachment of non-IdeaPad features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:

- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock)
- Explosive hazards, such as a damaged CRT face or a bulging capacitor
- Mechanical hazards, such as loose or missing hardware

To determine whether there are any potentially unsafe conditions, use the following checklist at the beginning of every service task. Begin the checks with the power off, and the power cord disconnected.

Checklist:

1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Power off the computer. Disconnect the power cord.
3. Check the power cord for:
   a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
   b. The power cord should be the type specified in the parts list.
   c. Insulation must not be frayed or worn.
4. Check for cracked or bulging batteries.
5. Remove the cover.
6. Check for any obvious non-IdeaPad alterations. Use good judgment as to the safety of any non-IdeaPad alterations.
7. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
8. Check for worn, frayed, or pinched cables.
9. Check that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

Handling devices that are sensitive to electrostatic discharge

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD.) ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Notes:
1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:
- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

Note:
The use of a grounding system to guard against ESD damage is desirable but not necessary.

  - Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
  - When working on a double-insulated or battery-operated system, use an ESD common ground or reference point. You can use coax or connector-outside shells on these systems.
  - Use the round ground prong of the ac plug on ac-operated computers.

Grounding requirements

Electrical grounding of the computer is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

Safety notices: multilingual translations

The safety notices in this section are provided in English, French, German, Hebrew, Italian, Japanese, and Spanish.

Safety notice 1

Before the computer is powered on after FRU replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

Avant de remettre l'ordinateur sous tension après remplacement d'une unité en clientèle, vérifiez que tous les ressorts, vis et autres pièces sont bien en place et bien fixées. Pour ce faire, secouez l'unité et assurez-vous qu'aucun bruit suspect ne se produit. Des pièces métalliques ou des copeaux de métal pourraient causer un court-circuit.

Bevor nach einem FRU-Austausch der Computer wieder angeschlossen wird, muß sichergestellt werden, daß keine Schrauben, Federn oder andere Kleinteile fehlen oder im Gehäuse vergessen wurden. Der Computer muß geschüttelt und auf Klappergeräusche geprüft werden. Metallteile oder-splitter können Kurzschlüsse erzeugen.

לפני הפעלת המחשב לאחר החלפת FRU יש לוודא שכל הברגים, הקפיצים, וחלקים קטנים אחרים נמצאים במקומם ואינם חופשיים לזוז בתוך המחשב. כדי לוודא זאת, יש לטלטל את המחשב ולהקשיב לגילוי קולות שקשוק. חלקי או שבבי מתכת עלולים לגרום לקצרים חשמליים.

Prima di accendere l'elaboratore dopo che é stata effettuata la sostituzione di una FRU, accertarsi che tutte le viti, le molle e tutte le altri parti di piccole dimensioni siano nella corretta posizione e non siano sparse all'interno dell'elaboratore. Verificare ciò scuotendo l'elaboratore e prestando attenzione ad eventuali rumori; eventuali parti o pezzetti metallici possono provocare cortocircuiti pericolosi.

FRU の交換後、 ThinkPad の電源を入れる前に、ねじ、バネ、その他の小さな部品がすべて正しい位置にあり、また ThinkPad の内部で緩んでいないことを確認してください。
これを確認するには、 ThinkPad を振って、カチャカチャと音がしないか確かめます。金属部品や金属破片はショートの原因になることがあります。

Antes de encender el sistema despues de sustituir una FRU, compruebe que todos los tornillos, muelles y demás piezas pequeñas se encuentran en su sitio y no se encuentran sueltas dentro del sistema. Compruébelo agitando el sistema y escuchando los posibles ruidos que provocarían. Las piezas metálicas pueden causar cortocircuitos eléctricos.

Safety notice 2

⚠ **DANGER**

Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l'eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l'horloge temps réel, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d'exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nur durch die Verkaufsstelle oder den IBM Kundendienst ausgetauscht werden. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Die Batterie kann schwere Verbrennungen oder Verätzungen verursachen. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts-oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללות המתנה מסוימות מכילות כמות קטנה של ניקל וקדמיום. אין לפרק סוללת המתנה, לטעון אותה מחדש, להשליך אותה לאש או למים או לקצר אותה. יש לסלק את הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell'acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell'RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

予備バッテリーの中には少量のニッケルとカドミウムが含まれているものがあります。したがって、予備バッテリーの分解、再充電、火または水の中への投棄、またはショートさせることは決して行わないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 3

⚠ **DANGER**

The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l'exposez ni au feu ni à l'eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d'exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

מארז הסוללה מכיל כמות קטנה של ניקל וקדמיום. אין לפרק את מארז הסוללה, להשליך אותו לאש או למים או לקצר אותו. יש לסלק את מארז הסוללה הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה בזמן החלפת מארז הסוללה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell'acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

バッテリー・パックには少量のニッケルが含まれています。バッテリー・パックを分解したり、火または水の中に投げ込んだり、ショートさせないでください。バッテリー・パックの廃棄にあたっては、地方自治体の条例または規則に従ってください。バッテリー・パックを交換するときは、適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 4

⚠ **DANGER**

The lithium battery can cause a fire, an explosion, or a severe burn. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

La pile de sauvegarde contient du lithium. Elle présente des risques d'incendie, d'explosion ou de brûlures graves. Ne la rechargez pas, ne retirez pas son connecteur polarisé et ne la démontez pas. Ne l'exposez pas à une temperature supérieure à 100°C, ne la faites pas brûler et n'en exposez pas le contenu à l'eau. Mettez la pile au rebut conformément à la réglementation en vigueur. Une pile inappropriée risque de prendre feu ou d'exploser.

Die Systembatterie ist eine Lithiumbatterie. Sie kann sich entzünden, explodieren oder schwere Verbrennungen hervorrufen. Batterien dieses Typs dürfen nicht aufgeladen, zerlegt, über 100 C erhitzt oder verbrannt werden. Auch darf ihr Inhalt nicht mit Wasser in Verbindung gebracht oder der zur richtigen Polung angebrachte Verbindungsstecker entfernt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללת הליתיום עלולה לגרום לשריפה, להתפוצצות או לכוויות קשות. אין לטעון אותה מחדש, לסלק את המחבר המקוטב שלה, לפרק אותה או לחמם אותה לטמפרטורה העולה על 100 מעלות צלזיוס. אין לשרוף את הסוללה ואין לחשוף את תוכן התא למים. יש לסלק את הסוללה כנדרש בתקנות ובחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימים. שימוש בסוללה אחרת עלול לגרום לסכנת שריפה או התפוצצות.

La batteria di supporto e una batteria al litio e puo incendiarsi, esplodere o procurare gravi ustioni. Evitare di ricaricarla, smontarne il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

リチウム・バッテリーは、火災、爆発、または重症のやけどを引き起こすことがあります。バックアップ・バッテリーの充電、その極性コネクターの取り外し、バッテリー本体の分解、
100 ℃ (212 ゚F) 以上への加熱、焼却、電池の中身を水に浸すことはしないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

La batería de repuesto es una batería de litio y puede provocar incendios, explosiones o quemaduras graves. No la recargue, ni quite el conector polarizado, ni la desmonte, ni caliente por encima de los 100°C (212°F), ni la incinere ni exponga el contenido de sus celdas al agua. Deséchela tal como dispone la normativa local.

Safety notice 5

If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately wash the affected areas with water for at least 15 minutes. Seek medical care if any symptoms from the fluid are present after washing.

Si le panneau d’affichage à cristaux liquides se brise et que vous recevez dans les yeux ou sur les mains une partie du fluide, rincez-les abondamment pendant au moins quinze minutes. Consultez un médecin si des symptômes persistent après le lavage.

Die Leuchtstoffröhre im LCD-Bildschirm enthält Quecksilber. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Der LCD-Bildschirm besteht aus Glas und kann zerbrechen, wenn er unsachgemäß behandelt wird oder der Computer auf den Boden fällt. Wenn der Bildschirm beschädigt ist und die darin befindliche Flüssigkeit in Kontakt mit Haut und Augen gerät, sollten die betroffenen Stellen mindestens 15 Minuten mit Wasser abgespült und bei Beschwerden anschließend ein Arzt aufgesucht werden.

אם מסך הגביש הנוזלי (LCD) נשבר והנוזל מתוך המסך בא במגע עם עיניכם או ידיכם, שטפו את האזורים הנגועים מיד במים במשך 15 דקות לפחות. פנו לקבלת עזרה רפואית אם תסמינים הנובעים מהמגע עם הנוזל נמשכים לאחר השטיפה.

Nel caso che caso l’LCD si dovesse rompere ed il liquido in esso contenuto entrasse in contatto con gli occhi o le mani, lavare immediatamente le parti interessate con acqua corrente per almeno 15 minuti; poi consultare un medico se i sintomi dovessero permanere.

LCD が破損し、 LCD の中の液体が目に入ったり、手に触れたりした場合は、液体が触れた部分を少なくとも 15 分間洗い流してください。洗い流した後に、液体によって何らかの症状が現れた場合は、医師の治療を受けてください。

Si la LCD se rompe y el fluido de su interior entra en contacto con sus ojos o sus manos, lave inmediatamente las áreas afectadas con agua durante 15 minutos como mínimo. Obtenga atención medica si se presenta algún síntoma del fluido despues de lavarse.

Safety notice 6

⚠ **DANGER**

To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

Afin d'éviter tout risque de choc électrique, ne retirez pas le cache en plastique protégeant la partie inférieure de la carte d'alimentation.

Aus Sicherheitsgründen die Kunststoffabdeckung, die den unteren Teil der Spannungswandlerplatine umgibt, nicht entfernen.

כדי למנוע התחשמלות, אין להסיר את מכסה הפלסטיק המגן על חלקו התחתון של הכרטיס ההפוך.

Per evitare scosse elettriche, non rimuovere la copertura in plastica che avvolge la parte inferiore della scheda invertitore.

感電を防ぐため、インバーター・カードの下部を保護しているプラスチック・カバーを外さないでください。

Para evitar descargas, no quite la cubierta de plástico que rodea la parte baja de la tarjeta invertida.

Safety notice 7

⚠ **DANGER**

Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d'une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

אף שהסוללות הראשיות הן בעלות מתח נמוך, סוללה מקוצרת או מוארקת עלולה להפיק זרם מספיק לגרימת כוויות או להצתת חומרים דליקים.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

メイン・バッテリーの電圧は低くても、ショートしたり、接地したバッテリーが、作業者にやけどを負わせたり、可燃物を燃やすだけの電流を発生させる場合があります。

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

Safety notice 8

⚠ DANGER

Before removing any FRU, power off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d’alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d’interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

**לפני סילוק FRU כלשהו, יש לכבות את המחשב,
לנתק את כל כבלי החשמל משקעי החשמל, להוציא
את מארז הסוללה, ואז לנתק כבלי חיבור אחרים
אם יש כאלה.**

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

FRU を取り外す前に、 ThinkPad の電源を切って、すべての電源コードをコンセントから外してください。次に、バッテリー・パックを外し、相互接続ケーブルを外してください。

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

Laser compliance statement

Some models of IdeaPad computer are equipped from the factory with an optical storage device such as a CD-ROM drive or a DVD-ROM drive. Such devices are also sold separately as options. If one of these drives is installed, it is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 825 and CENELEC EN 60 825 for Class 1 laser products.

If a CD-ROM drive, a DVD-ROM drive, or another laser device is installed, note the following:

⚠ **CAUTION:**

Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

O uso de controles, ajustes ou desempenho de procedimentos diferentes daqueles aqui especificados pode resultar em perigosa exposição à radiação.

凡未在这里指明的任何控制用法、调整、行为，都会导致严重后果。

Pour éviter tout risque d'exposition au rayon laser, respectez les consignes de réglage et d'utilisation des commandes, ainsi que les procédures décrites.

Werden Steuer- und Einstellelemente anders als hier festgesetzt verwendet, kann gefährliche Laserstrahlung auftreten.

Az itt előírt eljárásoktól, beállításoktól és vezérlésektől eltérni a lézersugárzás veszélye miatt kockázatos !

L'utilizzo di controlli, regolazioni o l'esecuzione di procedure diverse da quelle specificate possono provocare l'esposizione a.

Использование элементов настройки и выполнение процедур иных, чем указано здесь, может привести к опасному радиационному облучению.

Použitie kontrôl, úprav alebo iných vykonaní od iných výrobcov, ako je v tomto špecifikované, mohlo by mať za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

本書で指定された内容以外の、お客様による整備、調整、または手順を行った場合、レーザー光の放射の危険があります。

El uso de controles o ajustes o la ejecución de procedimientos distintos de los aquí especificados puede provocar la exposición a radiaciones peligrosas.

Opening the CD-ROM drive, the DVD-ROM drive, or any other optical storage device could result in exposure to hazardous laser radiation. There are no serviceable parts inside those drives. **Do not open.**

A CD-ROM drive, a DVD-ROM drive, or any other storage device installed may contain an embedded Class 3A or Class 3B laser diode. Note the following:

⚠ **DANGER**

Emits visible and invisible laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

Radiação por raio laser ao abrir. Não olhe fixo no feixe de luz, não olhe diretamente por meio de instrumentos óticos e evite exposição direta com o feixe de luz.

开启时会有激光发射时，请勿盯视激光光束，请勿直接查看
视觉仪器，并且避免直接接触在激光光束之中。

Rayonnement laser si carter ouvert. Évitez de fixer le faisceau, de le regarder directement avec des instruments optiques, ou de vous exposer au rayon.

Laserstrahlung bei geöffnetem Gerät. Nicht direkt oder über optische Instrumente in den Laserstrahl sehen und den Strahlungsbereich meiden.

Kinyitáskor lézersugár ! Ne nézzen bele se szabad szemmel, se optikai eszközökkel. Kerülje a sugárnyalábbal való érintkezést !.

Aprendo l'unità vengono emesse radiazioni laser. Non fissare il fascio, non guardarlo direttamente con strumenti ottici e evitare l'esposizione diretta al fascio.

Открывая, берегитесь лазерного излучения.
Не смотрите на луч, не разглядывайте его
с помощью оптических инструментов, а также
избегайте прямого воздействия лазерного луча.

Keď je laserová jednotka otvorená. Vyhnite sa priamemu
pohľadu a nehľadte priamo s optickými nástrojmi do ľúča
a vyhnite sa priamemu vystaveniu ľúčov.

開けるとレーザー光が放射されます。光線を見つめたり、光学機械を使って直接見
たりしないでください。

Radiación láser al abrir. No mire fijamente ni examine con instrumental óptico el haz de luz. Evite la exposición directa al haz.

Important service information

This chapter presents following important service information:

Important:
BIOS and device driver fixes are customer-installable. The BIOS and device drivers are posted on the customer support site `http://www.lenovo.com/support`

System Disassembly/Reassembly videos that show the FRU removals or replacements for the Lenovo® authorized service technicians are available in the following support site: `http://www.lenovoservicetraining.com/ion/`

Advise customers to contact the Customer Support Center at 800-426-7378 if they need assistance in obtaining or installing any software fixes, drivers, and BIOS downloads.

Customers in Canada should call the Customer Support Center at 800-565-3344 for assistance or download information.

Strategy for replacing FRUs

Before replacing parts:
Make sure that all software fixes, drivers, and BIOS downloads are installed before replacing any FRUs listed in this manual.

After a system board is replaced, ensure that the latest BIOS is loaded to the system board before completing the service action.

To download software fixes, drivers, and BIOS, do as follows:

1. Go to `http://www.lenovo.com/support`
2. Enter the product number of the computer or press Auto-detect button on the screen.
3. Select **Downloads and drivers**.
4. Follow the directions on the screen and install the necessary software.

Use the following strategy to prevent unnecessary expense for replacing and servicing FRUs:

- **If you are instructed to replace a FRU but the replacement does not correct the problem, reinstall the original FRU before you continue**.
- Some computers have both a processor board and a system board. If you are instructed to replace either the processor board or the system board, and replacing one of them does not correct the problem, reinstall that board, and then replace the other one.
- If an adapter or a device consists of more than one FRU, any of the FRUs may be the cause of the error. Before replacing the adapter or device, remove the FRUs, one by one, to see if the symptoms change. Replace only the FRU that changed the symptoms.

Attention: The setup configuration on the computer you are servicing may have been customized. Running Automatic Configuration may alter the settings. Note the current configuration settings (using the View Configuration option); then, when service has been completed, verify that those settings remain in effect.

Strategy for replacing a hard disk drive

Always try to run a low-level format before replacing a hard disk drive. This will cause all customer data on the hard disk to be lost. Be sure that the customer has a current backup of the data before doing this task.

Attention: The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

Important notice for replacing a system board

Some components mounted on a system board are very sensitive. Improper handling of a system board can cause damage to those components, and may cause a system malfunction.

Attention: When handling a system board:

- Do not drop a system board or apply any excessive force to it.
- Avoid rough handling of any kind.
- Avoid bending a system board and hard pushing to prevent cracking at each BGA (Ball Grid Array) chipset.

How to use error message

Use the error codes displayed on the screen to diagnose failures. If more than one error code is displayed, begin the diagnosis with the first error code. Whatever causes the first error code may also cause false error codes. If no error code is displayed, see whether the error symptom is listed in the Symptom-to-FRU Index for the computer you are servicing.

Strategy for replacing FRUs for CTO, CMV, and GAV

Product definition

Dynamic Configure To Order (CTO)

This provides the ability for a customer to configure an IBM® or a Lenovo solution from an eSite, and have this configuration sent to fulfillment, where it is built and shipped directly to the customer. The machine label, Product Entitlement Warehouse (PEW), eSupport, and the HMM will load these products as the 4-digit MT and 3-digit model, where model = "CTO" (Example: 1829-CTO).

Custom Model Variant (CMV)

This is a unique configuration that has been negotiated between IBM or Lenovo and the customer. A unique 4-digit MT and 3-digit model is provided to the customer to place orders (Example: 1829-W15). A CMV is a special bid offering. Therefore, it is NOT generally announced.

- The MTM portion of the machine label is the 4-digit MT and 3-digit model, where model = "CTO" (Example: 1829-CTO). The PRODUCT ID portion of the machine label is the 4-digit MT and 3-digit CMV model (Example: 1829-W15).
- The PEW record is the 4-digit MT and 3-digit model, where model = "CTO" (Example: 1829-CTO).
- eSupport will show both the CTO and CMV machine type models (Example: 1829-CTO and 1829-W15 will be found on the eSupport site.)
- The HMM will have the 4-digit MT and 3-digit CTO model only (Example: 1829-CTO). Again, CMVs are custom models and are not found in the HMM.

General Announce Variant (GAV)

This is a standard model (fixed configuration). GAVs are announced and offered to all customers. The MTM portion of the machine label is a 4-digit MT and 3-digit model, where model = a "fixed part number", not "CTO" (Example: 1829-F1U). Also, PEW, eSupport, and the HMM will list these products under the same fixed model number.

FRU identification for CTO, CMV, and GAV products

There are three information resources to identify which FRUs are used to support CTO, CMV, and GAV products. These sources are PEW, eSupport, and the HMM.

Using PEW

- **PEW** is the primary source for identifying FRU part numbers and FRU descriptions for the key commodities for CTO, CMV and GAV products at a MT - serial number level. An example of key commodities are hard disk drives, system boards, microprocessors, Liquid Crystal Displays (LCDs), and memory.
- Remember, all CTO and CMV products are loaded in PEW under the 4-digit MT and 3-digit model, where model = "CTO" (Example: 1829-CTO). GAVs are loaded in PEW under the 4-digit MT and 3-digit model, where model = a "fixed part number", not "CTO" (Example: 1829-F1U).
- PEW can be accessed at the following Web site: `http://www.lenovo.com/support/site.wss/document.do?lndocid=LOOK-WARNTY` Select Warranty lookup. Input the MT and the Serial number and the list of key commodities will be returned in the PEW record under COMPONENT INFORMATION.

- **Business Partners** using Eclaim will access PEW when performing Entitlement Lookup. Business Partners will enter Loc ID, MT and Serial, and the key commodities will be returned in the Eclaim record under SYSTEM DETAILS.
- Authorized IBM Business Partners can access Eclaim at the following Web site: `https://wca.eclaim.com`

Using eSupport

For Key Commodities (Examples - hard disk drive, system board, microprocessor, LCD, and memory)

- eSupport can be used to view the list of key commodities built in a particular machine serial (this is the same record found in PEW).
- eSupport can be accessed at the following Web site: `http://www.lenovo.com/support`
- To view the key commodities, click on PARTS INFORMATION, then PARTS LOOKUP. Type in the model type and serial number. The key commodities will be returned in the eSupport record under PARTS SHIPPED WITH YOUR SYSTEM.

For the Remaining FRUs (the complete list of FRUs at the MT Model level)

- eSupport can be used to view the complete list of FRUs for a machine type and model.
- To view the complete list of FRUs, type in the machine type and model (Example: 1829-CTO) under QUICK PATH. Under “View by Document Type” select PARTS INFORMATION. Under “Filter by Category” select SERVICE PARTS. Under “Parts Information by Date” select SYSTEM SERVICE PARTS. The list of service parts by description, with applicable machine type model and FRU will be displayed.

Using the HMM

For Key Commodities (Examples - hard disk drive, system board, microprocessor, LCD, and memory)

Use the HMM as a back-up to PEW and eSupport to view the complete list of FRUs at the MT Model level.

Important information about replacing RoHS compliant FRUs

RoHS, The Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (2002/95/EC) is a European Union legal requirement affecting the global electronics industry. RoHS requirements must be implemented on Lenovo products placed on the market after June 2006. Products on the market before June 2006 are not required to have RoHS compliant parts. If the original FRU parts are non compliant, replacement parts can also be non compliant. In all cases if the original FRU parts are RoHS compliant, the replacement part must also be RoHS compliant.

Note: RoHS and non-RoHS FRU part numbers with the same fit and function are identified with unique FRU part numbers.

Lenovo plans to transition to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo's requirements and schedule in the EU. Products sold in 2005 and 2006, will contain some RoHS compliant FRUs. The following statement pertains to these products and any product Lenovo produces containing RoHS compliant FRUs.

RoHS compliant FRUs have unique FRU part numbers. Before or after the RoHS implementation date, failed RoHS compliant parts must always be replaced using RoHS compliant FRUs, so only the FRUs identified as compliant in the system HMM or direct substitutions for those FRUs may be used.

Products marketed before June 2006		Products marketed after June 2006	
Current or original part	**Replacement FRU**	**Current or original part**	**Replacement FRU**
Non-RoHS	Can be Non-RoHS	Must be RoHS	Must be RoHS
Non-RoHS	Can be RoHS		
Non-RoHS	Can sub to RoHS		
RoHS	Must be RoHS		

Note: A direct substitution is a part with a different FRU part number that is automatically shipped by the distribution center at the time of the order.

General checkout

This chapter presents following information:

The descriptions in this chapter apply to any IdeaPad model that supports the PC-Doctor® for DOS diagnostics program. Some descriptions might not apply to your particular computer.

Before you go to the checkout guide, be sure to read the following important notes.

Important notes:

- **Only certified trained personnel should service the computer.**
- **Before replacing any FRU, read the entire page on removing and replacing FRUs.**
- **When you replace FRUs, use new nylon-coated screws.**
- **Be extremely careful during such write operations as copying, saving, or formatting.** Drives in the computer that you are servicing sequence might have been altered. If you select an incorrect drive, data or programs might be overwritten.
- **Replace a FRU only with another FRU of the correct model.** When you replace a FRU, make sure that the model of the machine and the FRU part number are correct by referring to the FRU parts list.
- **A FRU should not be replaced because of a single, unreproducible failure.** Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing a FRU only when a problem recurs. If you suspect that a FRU is defective, clear the error log and run the test again. If the error does not recur, do not replace the FRU.
- **Be careful not to replace a nondefective FRU.**

What to do first

When you do return a FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

__ 1. Name and phone number of servicer
__ 2. Date of service
__ 3. Date on which the machine failed
__ 4. Date of purchase
__ 5. Failure symptoms, error codes appearing on the display, and beep symptoms
__ 6. Procedure index and page number in which the failing FRU was detected
__ 7. Failing FRU name and part number
__ 8. Machine type, model number, and serial number
__ 9. Customer's name and address

Note for warranty: During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

Following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.

Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:

- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disc insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect ac adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:

- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Checkout guide

Use the following procedures as a guide in identifying and correcting problems with the IdeaPad computer.

Note: The diagnostic tests are intended to test only IdeaPad products. The use of non-IdeaPad products, prototype cards, or modified options can lead to false indications of errors and invalid system responses.

1. Identify the failing symptoms in as much detail as possible.
2. Verify the symptoms. Try to re-create the failure by running the diagnostic test or by repeating the operation.

Diagnostics using PC-Doctor for DOS

The IdeaPad computer has a test program called PC-Doctor for DOS (hereafter called *PC-Doctor*.) You can detect errors by running the diagnostics test included in PC-Doctor. This section is an overview of the procedure. For details that depend on model-unique functions, refer to "IdeaPad S9e, S10e, and S10" on page 45.

> **Note:**
> PC-Doctor for DOS is available at following Web site: `http://www.lenovo.com/support`
>
> To create the PC-Doctor diagnostic CD or DVD, follow the instruction on the Web site.

For some possible configurations of the computer, PC-Doctor might not run correctly. To avoid this problem, you need to initialize the computer setup by use of the BIOS Setup Utility before you run PC-Doctor.

To enter the BIOS Setup Utility, do as follows:
1. Turn on the computer.
2. When the Lenovo logo comes up, immediately press F2 to enter the BIOS Setup Utility.

Note: If the customer has set a supervisor password, the BIOS Setup Utility menu appears after the password is entered. If the customer has set a user password, you can start the utility by entering that password; however, you cannot change all of the parameters.

On the BIOS Setup Utility screen, press F9, Enter, F10, and then Enter.

Note: When you initialize the computer configuration, some devices are disabled, such as the serial port. If you test one of these devices, you will need to enable it by using Configuration utility for DOS. The utility is available on the following Web site: `http://www.lenovo.com/support`

Testing the computer

To run the test, do as follows:
1. Insert the PC-Doctor disc into the optical drive; then power on the computer.

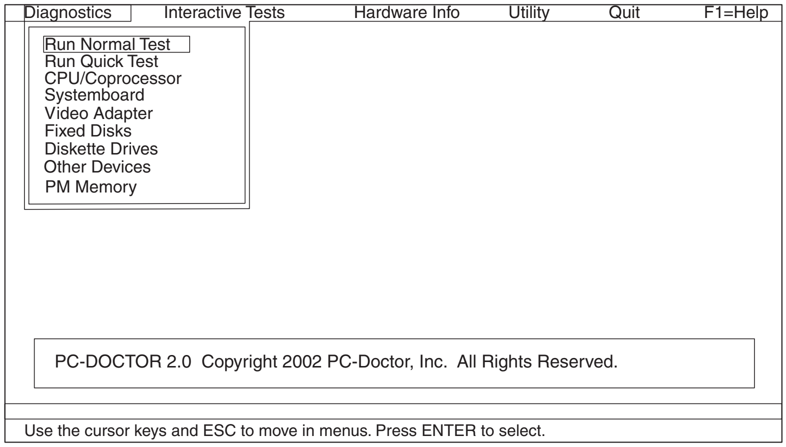
   If the computer cannot be powered on, go to "Power system checkout" on page 29, and check the power sources.

   If an error code appears, go to "Symptom-to-FRU index" on page 39.

   On the first screen, select the model and press Enter. Follow the instructions on the screen.
2. The main panel of PC-Doctor appears.
3. Select **Diagnostics** with the arrow keys, and press Enter.

   A pull-down menu appears. (Its exact form depends on the model.)

   Note: PC-Doctor menu does not mean the formal support device list. Some unsupported device names may appear in the PC-Doctor menu.



The options on the test menu are as follows:

<table>
<tr><th>Diagnostics</th><th>Interactive Tests</th></tr>
<tr><td>• Run Normal Test
• Run Quick Test
• CPU/Coprocessor
• Systemboard
• Video Adapter
• Fixed Disks
• Diskette Drives
• Other Devices
• PM Memory</td><td>• Keyboard
• Video
• Mouse
• Diskette
• System Load
• Optical Drive Test</td></tr>
<tr><td colspan="2">Notes:
• In the Keyboard test in Interactive Tests, the Fn key should be held down for at least 2 seconds; otherwise, it cannot be sensed.
• Video Adapter test supports only the LCD display on the IdeaPad computer. If you have an external monitor attached to your computer, detach it before running PC-Doctor for DOS.</td></tr>
</table>

4. Run the applicable function test.
5. Follow the instructions on the screen. If there is a problem, PC-Doctor shows messages describing it.
6. To exit the test, select **Quit — Exit Diag**.

   To cancel the test, press Esc.

Note: After running PC-Doctor, check the time and date on the system and reset them if they are incorrect.

Detecting system information with PC-Doctor

PC-Doctor can detect the following system information:

Hardware Info
- System Configuration
- Memory Contents
- Physical Disk Drives
- Logical Disk Drives
- VGA Information
- IDE Drive Info

- PCI Information
- PNPISA Info
- SMBIOS Info
- VESA LCD Info
- Hardware Events Log

Utility

- Run External Tests
- Surface Scan Hard Disk
- Benchmark System
- DOS Shell
- Tech Support Form
- Battery Rundown
- View Test Log
- Print Log
- Save Log
- Full Erase Hard Drive
- Quick Erase Hard Drive

PC-Doctor for Windows

This product is designed to help you troubleshoot and resolve problems related to your computer. Select one of the categories listed below to display symptoms and solutions:

- Check System Health
- System and Device Tests
- Lenovo Troubleshooting Center
- System Reports
- Updates and Support

Power system checkout

To verify a symptom, do the following:

1. Turn off the computer.
2. Remove the battery pack.
3. Connect the ac adapter.
4. Check that power is supplied when you turn on the computer.
5. Turn off the computer.
6. Disconnect the ac adapter and install the charged battery pack.
7. Check that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- "Checking the ac adapter"
- "Checking operational charging"
- "Checking the battery pack" on page 30
- "Checking the backup battery" on page 30

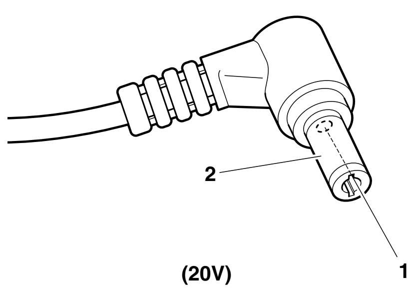
Checking the ac adapter

You are here because the computer fails only when the ac adapter is used.

- If the power-on indicator does not turn on, check the power cord of the ac adapter for correct continuity and installation.
- If the computer does not charge during operation, go to "Checking operational charging"

To check the ac adapter, do the following:

1. Unplug the ac adapter cable from the computer.
2. Measure the output voltage at the plug of the ac adapter cable. See the following figure:



Pin	Voltage (V dc)
1	+20
2	Ground

3. If the voltage is not correct, replace the ac adapter.
4. If the voltage is acceptable, do the following:
   - Replace the system board.
   - If the problem persists, go to "IdeaPad S9e, S10e, and S10" on page 45.

Note: Noise from the ac adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not turn on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon still does not turn on, replace the battery pack.

If the charge indicator still does not turn on, replace the system board. Then reinstall the battery pack. If it is still not charged, go to the next section.

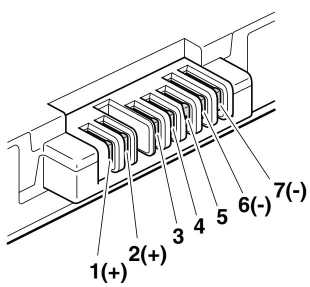
Checking the battery pack

Battery charging does not start until the Power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

To check your battery, move your cursor to the Power Meter icon in the icon tray of the Windows® taskbar and wait for a moment (but do not click), and the percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Note: If the battery pack becomes hot, it may not be able to charge. Remove it from the computer and leave it at room temperature for a while. After it cools down, reinstall and recharge it.

To check the battery pack, do the following:
1. Power off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1 (+) and 7 (-). See the following figure:



Terminal	Voltage (V dc)
1	+ 0 to + 12.6
7	Ground (-)

3. If the voltage is less than +11.0 V dc, the battery pack has been discharged.

   Note: Recharging will take at least 3 hours, even if the indicator does not turn on.

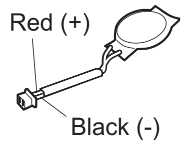
   If the voltage is still less than +11.0 V dc after recharging, replace the battery.
4. If the voltage is more than +11.0 V dc, measure the resistance between battery terminals 5 and 7. The resistance must be 4 to 30 K Ω.

   If the resistance is not correct, replace the battery pack. If the resistance is correct, replace the system board.

Checking the backup battery

Do the following:
1. Power off the computer, and unplug the ac adapter from it.
2. Turn the computer upside down.
3. Remove the battery pack (see “1010 Battery pack” on page 57).

4. Remove the backup battery (see “1110 Fan, backup battery, and system board” on page 77).
5. Measure the voltage of the backup battery. See the following figure.



Wire	Voltage (V dc)
Red	+2.5 to +3.2
Black	Ground

- If the voltage is correct, replace the system board.
- If the voltage is not correct, replace the backup battery.
- If the backup battery discharges quickly after replacement, replace the system board.

Related service information

This chapter presents following information:
- "Restoring the factory contents by using Product Recovery discs"
- "Passwords" on page 34
- "Power management" on page 37
- "Symptom-to-FRU index" on page 39

> **Service Web site:**
> When the latest maintenance utility and the system program service diskette become available, they will be posted on `http://www.lenovo.com/spm`

Restoring the factory contents by using Product Recovery discs

When the hard disk drive (HDD) or system board with a solid state drive (SSD) is replaced because of a failure, no Product Recovery program is on the new drive. In this case, you must use the recovery discs for the computer. Order the recovery discs and the hard disk drive or system board with a solid state drive at the same time so that you can recover the new drive with the pre-installed software when they arrive. For information on which discs to order, see "Recovery discs" on page 126.

To install the factory contents by using Product Recovery discs, do the following:

> **Note:** Recovery takes several hours. The length of time depends on the method you use. If you use recovery discs, recovery takes at least five hours.

Windows XP Home Edition:

1. Insert the bootable disc.
2. Reboot the computer.
3. When the Lenovo logo comes up, press **F12** to enter the Boot Menu.
4. To boot from the optical drive, select the optical drive, and then press **Enter**.
5. Select your language, and click **Next**.
6. Read the license. If you agree to the terms, select **I accept these terms and conditions** and click **Next**.
7. Click **Next** to begin the recovery precess.
8. When prompted, insert the **Product Recovery Disc** and click **OK**.
9. When all of the data has been copied from the Product Recovery Disc, the computer will restart automatically.

   Note: The remainder of the recovery process is fully automated; no action is required by you. The computer will restart into the Windows desktop several times, and you might experience periods when no activity is apparent on the screen for several minutes at a time. This is normal.

10. When the recovery process is complete, the Welcome to Microsoft Windows screen is displayed. Follow the instructions on the screen to complete the Windows setup.

SUSE Linux Enterprise Desktop 10:

1. Insert the bootable disc.
2. Reboot the computer.
3. When the Lenovo logo comes up, press **F12** to enter the Boot Menu.
4. To boot from the optical drive, select the optical drive, and then press **Enter**.
5. To begin the recovery process, select **Restore System**.
6. A box pops up that says, "Think again... This will destroy ALL data on your computer. There is no way back. Please save everything you might need before you continue! Are you really sure? OK/Cancel." Click **OK**.
7. A black screen appears, with messages showing that system data is being written and then that data is being verified.
8. When the recovery process is complete, you will be prompted to remove the disc and press a key to reboot the computer. Follow the instructions on the screen.

Passwords

As many as three passwords may be needed for any IdeaPad computer: the hard-disk password (HDP), the supervisor password (SVP), and the user password.

If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.

Exception: If only an SVP and a user password are installed, and **Password on boot** is set to **Disabled**, the password prompt does not appear when the operating system is booted.

Hard-disk password

Note: Computers with the solid state drive (SSD) do not support the hard-disk password.

There are two hard-disk passwords (HDPs):

- User HDP—for the user
- Master HDP—for the system administrator, who can use it to get access to the hard disk even if the user has changed the user HDP

Note: The **Master + User** mode requires two HDPs; the system administrator enters both in the same operation. The system administrator then provides the user HDP to the system user.

Attention: If the user HDP has been forgotten, check whether the master HDP is available. If it is, it can be used for access to the hard disk drive. If no master HDP is available, neither Lenovo nor Lenovo authorized servicers provide any services to reset either the user or the master HDP, or to recover data from the hard disk drive. The hard disk drive can be replaced, for a scheduled fee.

For how to remove the HDP, see "How to remove the hard-disk password."

Supervisor password

A supervisor password (SVP) protects the system information stored in the BIOS Setup Utility. The user enters the SVP to get access to the BIOS Setup Utility and change the system configuration. It also can be used as a power-on password (POP), if **Password on boot** is set to **Enabled**.

For how to remove the SVP, see "How to remove the supervisor password" on page 36.

User password

If a user password has been set and **Password on boot** is set to **Enabled**, a password prompt appears on the screen whenever the computer is turned on. The user password is also used to enter the BIOS Setup Utility, but only a part of the options can be set. The user password can be set only when the SVP has been set.

For how to remove the user password, see "How to remove the user password" on page 36.

Power-on password

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted. The SVP and the user password can be used as the POP, if **Password on boot** is set to **Enabled**.

How to remove the hard-disk password

Attention: If the user HDP has been forgotten and the master HDP cannot be made available to the servicer, neither Lenovo nor Lenovo authorized servicers provide any services to reset the user HDPs or to recover data from the hard disk drive. The hard disk drive can be replaced, for a scheduled fee.

To remove a user HDP that has been forgotten, when the SVP and the master HDP are known, do the following:

1. Turn on the computer.
2. When the Lenovo logo comes up, immediately press F2 to enter the BIOS Setup Utility.
3. Enter the master HDP.
4. Select **Security**, using the cursor directional keys to move down the menu.
5. Select **Set Hard Disk Passwords**.
6. Select **Change Master Password**.
7. Type the current master HDP in the **Enter Current Password** field. then leave the **Enter New Password** field blank, and press Enter twice.
8. In the Changes have been saved window, press Enter.
9. Press F10.
10. Select **Yes** in the Setup Configuration window.

    Both user HDP and master HDP will have been removed.

How to remove the supervisor password

To remove an SVP, do the following:

(A) If an SVP is know to the servicer:

1. Turn on the computer.
2. When the Lenovo logo comes up, immediately press F2 to enter the BIOS Setup Utility.
3. If **Password on boot** is set to **Enabled**, enter the SVP.
4. Select **Security**, using the cursor directional keys to move down the menu.
5. Select **Set Supervisor Password**.
6. Type the current SVP in the **Enter Current Password** field. Then leave the **Enter New Password** field blank, and press Enter twice.
7. In the Changes have been saved window, press Enter.
8. Press F10; then, in the Setup confirmation window, select **Yes** .

   Both the SVP and the user password will be removed.

(B) If an SVP has been forgotten:

1. Turn on the computer.
2. Unplug the AC adapter cable from the computer.
3. Remove the battery pack.

   For how to remove the battery pack, see “1010 Battery pack” on page 57.
4. Remove the backup battery.

   For how to remove the backup battery, see “1110 Fan, backup battery, and system board” on page 77.
5. Wait about one minute.
6. Reinstall the backup battery and the battery pack.

   Both the SVP and the user password will be removed.

How to remove the user password

To remove a user password that is known to the servicer, do the following:

1. Turn on the computer.
2. When the Lenovo logo comes up, immediately press F2 to enter the BIOS Setup Utility.
3. If **Password on boot** is set to **Enabled**, enter the user password.
4. Select **Security**, using the cursor directional keys to move down the menu.
5. Select **Set User Password**.
6. Type the current user password in the **Enter Current Password** field. Then leave the **Enter New Password** field blank, and press Enter twice.
7. In the Changes have been saved window, press Enter.
8. Press F10; then, in the Setup confirmation window, select **Yes** .

To remove a user password that has been forgotten, when the SVP is known, see “How to remove the supervisor password”

Power management

To reduce power consumption, the computer has three power management modes: screen blank, standby, and hibernation.

Screen blank mode

To enter screen blank mode, press Fn + F2. To end screen blank mode and resume normal operation, press Fn + F2.

In certain circumstances, the computer goes into screen blank mode automatically:
- If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off.

To end screen blank mode and resume normal operation, press any key.

Standby mode

When the computer enters standby mode, the following events occur in addition to what occurs in screen blank mode:
- The LCD is powered off.
- The hard disk drive is powered off.
- The CPU stops.

To enter standby mode, press Fn+F1.

Note: If you are using the ACPI operating system, you can change the action of Fn+F1.

In certain circumstances, the computer goes into standby mode automatically:
- If a “suspend time” has been set on the timer, and the user does not do any operation with the keyboard, the touch panel, the hard disk, the parallel connector, or the optical drive within that time.
- If the battery indicator blinks orange, indicating that the battery power is low. (Alternatively, if **Hibernate when battery becomes low** has been selected in the “Power Management Properties” window, the computer goes into hibernation mode.)

Note for the APM operating system: Even if you do not set the low-battery alarm, the charge indicator notifies you when the battery is low, and then the computer enters the power-saving mode automatically. This default low-battery behavior is independent of the operating system; so if you have set the low-battery alarm, the computer may not do what you specified. It chooses either your setting or the default setting, whichever is appropriate.

If you are using the ACPI operating system, only the low-battery alarm is available.

To cause the computer to return from standby mode and resume operation, do one of the following:
- Press the Fn key.
- Open the LCD cover.
- Turn on the power switch.

Also, in either of the following events, the computer automatically returns from standby mode and resumes operation:

- The ring indicator (RI) is signaled by a serial device or a PC Card device.
- The time set on the resume timer elapses.

  Note: The computer does not accept any input immediately after it enters standby mode. Wait a few seconds before taking any action to reenter operation mode.

Hibernation mode

Note: Computers with the solid state drive (SSD) do not support hibernation mode.

In hibernation mode, the following occurs:

- The system status, RAM, VRAM, and setup data are stored on the hard disk.
- The system is powered off.

To cause the computer to enter hibernation mode, do any of the following:

- If you are using the APM operating system and have set the mode to **Power switch mode [Hibernation]**, turn off the power switch.
- If you are using the ACPI operating system and have defined one of the following actions as the event that causes the system to go into hibernation mode, perform that action.
  - Closing the lid.
  - Pressing the power button.
  - Pressing Fn+F1 keys.

Also, the computer goes into hibernation mode automatically in either of the following conditions:

- If a "hibernation time" has been set on the timer, and if the user does not do any operation with the keyboard, the touch panel, the hard disk drive, the parallel connector, or the optical drive within that time.
- If the timer conditions are satisfied in suspend mode.
- If you are using the APM operating system and have set the mode to **Hibernate when battery becomes low**, and the battery charge becomes critically low.

When the power is turned on, the computer returns from hibernation mode and resumes operation. The hibernation file in the boot record on the hard disk drive is read, and system status is restored from the hard disk drive.

Symptom-to-FRU index

This section contains following information:
- "Numeric error codes"
- "Error messages" on page 41
- "Beep symptoms" on page 42
- "No-beep symptoms" on page 42
- "LCD-related symptoms" on page 43
- "Intermittent problems" on page 44
- "Undetermined problems" on page 44

The symptom-to-FRU index in this section lists symptoms and errors and their possible causes. The most likely cause is listed first, in boldface type.

Note: Do the FRU replacement or other actions in the sequence shown in the column headed "FRU or action, in sequence." If replacing a FRU does not solve the problem, put the original part back in the computer. Do not replace a nondefective FRU.

This index can also help you determine, during regular servicing, what FRUs are likely to need to be replaced next.

A numeric error is displayed for each error detected in POST or system operation. In the displays, **n** can be any number.

If no numeric code is displayed, check the narrative descriptions of symptoms. If the symptom is not described there, go to "Intermittent problems" on page 44.

Note:
For a device not supported by diagnostic codes in the IdeaPad computers, see the manual for that device.

Numeric error codes

Table 1. Numeric error codes

Symptom or error	FRU or action, in sequence
0200 Failure Fixed Disk.	1. **Reseat the hard disk drive.** 2. Load Setup Defaults in BIOS Setup Utility. 3. Hard disk drive. 4. System board.
0210 Stuck Key.	**Run interactive tests of the keyboard and the auxiliary input device.**
0211 Keyboard error.	
0212 Keyboard Controller Failed.	
0220 Monitor type error—Monitor type does not match the one specified in CMOS.	**Load Setup Defaults in BIOS Setup Utility.**
0230 Shadow RAM Fails at offset:	**System board.**

Table 1. Numeric error codes (continued)

Symptom or error	FRU or action, in sequence
0231 System RAM Fails at offset:	1. **DIMM.** 2. System board.
0232 Extended RAM Fails at address line:	1. **DIMM.** 2. System board.
0250 System battery dead—Replace and run SETUP.	1. **Charge the backup battery for more than 8 hours by connecting the ac adapter.** 2. Replace the backup battery and run BIOS Setup Utility to reset the time and date.
0251 System CMOS checksum bad— Default configuration used.	1. **Charge the backup battery for more than 8 hours by connecting the ac adapter.** 2. Replace the backup battery and run BIOS Setup Utility to reset the time and date.
0252 Password checksum bad—The password is cleared.	**Reset the password by running BIOS Setup Utility.**
0260 System timer error.	1. **Charge the backup battery for more than 8 hours by connecting the ac adapter.** 2. Replace the backup battery and run BIOS Setup Utility to reset the time and date. 3. System board.
0270 Real time clock error.	1. **Charge the backup battery for more than 8 hours by connecting the ac adapter.** 2. Replace the backup battery and run BIOS Setup Utility to reset the time and date. 3. System board.
0271 Check date and time settings.	**Run BIOS Setup Utility to reset the time and date.**
0280 Previous boot incomplete— Default configuration used.	1. **Load "Setup Default" in BIOS Setup Utility.** 2. DIMM. 3. System board.
02F0 CPU ID:xx Failed.	**System board.**
02F4 EISA CMOS not writable.	1. **Load Setup Defaults in BIOS Setup Utility.** 2. Replace the backup battery. 3. System board.
02F5 DMA test failed.	1. **DIMM.** 2. System board.
02F6 Software NMI failed	1. **DIMM.** 2. System board.
02F7 Fail-safe timer NMI failed	1. **DIMM.** 2. System board.

Error messages

Table 2. Error messages

Symptom or error	FRU or action, in sequence
Device address conflict.	1. **Load "Setup Defaults" in the BIOS Setup Utility**. 2. Backup battery. 3. System board.
Allocation error for device.	1. **Load "Setup Defaults" in the BIOS Setup Utility**. 2. Backup battery. 3. System board.
Failing bits: nnnn.	1. **DIMM**. 2. System board.
Invalid system configuration data.	1. **DIMM**. 2. System board.
I/O device IRQ conflict.	1. **Load "Setup Defaults" in the BIOS Setup Utility**. 2. Backup battery. 3. System board.
Hibernation error.	1. **Restore the system configuration to what it was before the computer entered hibernation mode**. 2. If memory size has been changed, re-create the hibernation file.
Fan error.	1. **Fan**. 2. Thermal grease. 3. System board.
Thermal sensing error.	**System board**.
Cannot boot from any device.	**Check the status of device which you want to boot from.** Device not found. 1. The device you want to boot from. 2. System board. Device Error. 1. The device you want to boot from. 2. System board. No valid operating system. 1. Check that the operating system has no failure and is installed correctly. 2. Reinstall the operation system. Excluded from boot order. • Enter the BIOS Setup Utility and add the device in boot order.

Beep symptoms

Table 3. Beep symptoms

Symptom or error	FRU or action, in sequence
One beep and a blank, unreadable, or flashing LCD.	1. **Reseat the LCD connector**. 2. LCD assembly. 3. External CRT. 4. System board.
One long and two short beeps, and a blank or unreadable LCD.	1. **System board**. 2. LCD assembly. 3. DIMM.
Two short beeps with error codes.	**POST error. See "Numeric error codes" on page 39.**
Two short beeps and a blank screen.	1. **System board**. 2. DIMM.
Three short beeps, pause, three more short beeps, and one short beep.	1. **DIMM**. 2. System board
One short beep, pause, three short beeps, pause, three more short beeps, and one short beep.	
Only the cursor appears.	**Reinstall the operating system**.
Four cycles of four short beeps and a blank screen.	**System board**
Five short beeps and a blank screen.	**System board**

No-beep symptoms

Table 4. No-beep symptoms

Symptom or error	FRU or action, in sequence
No beep, power-on indicator on, LCD blank, and no POST.	1. **Make sure that every connector is connected tightly and correctly**. 2. DIMM. 3. System board.
No beep, power-on indicator on, and LCD blank during POST.	1. **Reseat DIMM**. 2. System board.
The power-on password prompt appears.	A power-on password or a supervisor password is set. Type the password and press **Enter**.
The hard-disk password prompt appears.	A hard-disk password is set. Type the password and press **Enter**.

LCD-related symptoms

Important: The TFT LCD for the notebook computer contains many thin-film transistors (TFTs). The presence of a small number of dots that are missing, discolored, or always lighted is characteristic of TFT LCD technology, but excessive pixel problems can cause viewing concerns. The LCD should be replaced if the number of missing, discolored, or lighted dots in any background is as follows:

Table 5. Minimum quantity of defective pixels required for LCD replacement in IdeaPad S9e, S10e, and S10

LCD resolution	Bright dots	Dark dots	Bright and dark dots
WSVGA	5	5	7

Notes:
- Lenovo will not provide replacement if the LCD is within specification as we cannot guarantee that any replacement LCD will have zero pixel defects.
- A bright dot means a pixel is always on (white or color.)
- A dark dot means a pixel is always off (black color.)
- One pixel consists of R, G, B sub-pixels.

Table 6. LCD-related symptoms

Symptom or error	FRU or action, in sequence
No beep, power-on indicator on, and a blank LCD during POST.	**System board**.
• LCD backlight not working. • LCD too dark. • LCD brightness cannot be adjusted. • LCD contrast cannot be adjusted.	1. **Reseat the LCD connectors**. 2. LCD assembly. 3. System board.
• LCD screen unreadable. • Characters missing pixels. • Screen abnormal. • Wrong color displayed.	1. **See important note for “LCD-related symptoms.”** 2. Reseat all LCD connectors. 3. LCD assembly. 4. System board.
Horizontal or vertical lines displayed on LCD.	**LCD assembly**.

Intermittent problems

Intermittent system hang problems can be due to a variety of causes that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a problem recurs.

When analyzing an intermittent problem, do the following:

1. Run the diagnostic test for the system board in loop mode **at least 10 times**.
2. If no error is detected, do **not** replace any FRUs.
3. If any error is detected, replace the FRU shown by the FRU code. Rerun the test to verify that no more errors exist.

Undetermined problems

If the diagnostic tests did not identify the adapter or device that has failed, if wrong devices are installed, or if the system simply is not operating, follow these procedures to isolate the failing FRU (do not isolate FRUs that have no defects).

Verify that all attached devices are supported by the computer.

Verify that the power supply being used at the time of the failure is operating correctly. (See "Power system checkout" on page 29.)

1. Turn off the computer.
2. Visually check each FRU for damage. Replace any damaged FRU.
3. Remove or disconnect all of the following devices:
   a. Non-IdeaPad devices
   b. Printer, mouse, and other external devices
   c. Battery pack
   d. Hard disk drive
   e. External diskette drive or optical drive
   f. DIMM
   g. Optical disk or diskette in the internal drive
   h. PC Cards
4. Turn on the computer.
5. Determine whether the problem has been solved.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
7. If the problem remains, replace the following FRUs one at a time (do not replace a nondefective FRU):
   a. System board
   b. LCD assembly

IdeaPad S9e, S10e, and S10

This chapter presents following product-specific service references and product-specific parts information.

Specifications

The following table lists the specifications of the IdeaPad S9e, S10e, and S10 :

Table 7. Specifications

Feature	Description
Processor	• Intel® ATOM™ Processor N270 (1.6 GHz), 533-MHz FSB, 512-MB L2 cache
Bus architecture	• 533-MHz FSB • 667-MHz DDR2 SDRAM (PC2-5300) • PCI bus • PCI Express bus • DMI
Graphic memory chip	• Intel® 945GSE
Display	• 8.9-inch, 16M colors, WSVGA (1024 × 600 resolution) TFT color, LED backlight LCD (IdeaPad S9e) • 10.1-inch, 16M colors, WSVGA (1024 × 576 resolution) TFT color, LED backlight LCD (IdeaPad S10 and S10e)
Standard memory (on-board memory)	• 512-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) (IdeaPad S9e and S10e) • 1-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) (IdeaPad S10)
Extended memory device	• 512-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 1-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 maximum of 1.5 GB (IdeaPad S9e and S10e) maximum of 2.0 GB (IdeaPad S10)
CMOS RAM	• 242 bytes
Hard disk drive	• 80 GB, 5400 rpm, 9.5 mm high, SATA interface • 160 GB, 5400 rpm, 9.5 mm high, SATA interface Supported hard disk drives depend on the model.
Solid state drive	• 4 GB (some models of IdeaPad S9e and S10e)
I/O port	• External monitor connector • Stereo headphone jack • Monaural microphone jack • RJ-45 (Ethernet) connector • Universal serial bus (USB) connector × 2 • Multi-media reader slot • ExpressCard slot (IdeaPad S9e and S10e)
Audio	• Built-in speakers • Software control volume
Ethernet	• 10/100 Base Ethernet
PCI Express Mini Card	• Broadcom 11b/g WiFi wireless adapter • Ericsson F3507g USA - Wireless WAN card (IdeaPad S10) • Ericsson F3507g Other - Wireless WAN card (IdeaPad S10)
Bluetooth wireless	• *Bluetooth* with Enhanced Data Rate (BDC-2.1)
Battery	• Li-ion battery (3 cells, 2.6 Ah) • Li-ion battery (6 cells, 2.4 Ah)
AC adapter	• 40-watt type (20V)
Preinstalled operating system	• Windows XP Home Edition • SUSE Linux Enterprise Desktop 10 (some models of IdeaPad S9e and S10e)

Status indicators

The system status indicators show the status of the computer, as follows:

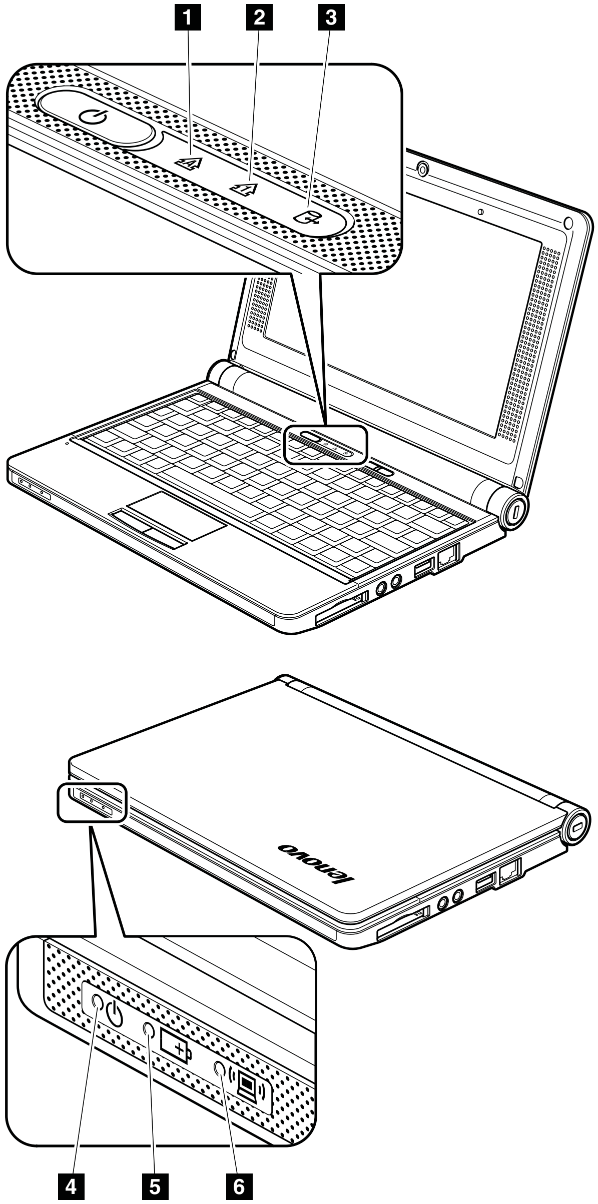


Table 8. Status indicators

Indicator		Meaning	
1	Caps lock	**Blue:**	Caps lock mode is enabled. To enable or disable Caps lock mode, press the CapsLk key.
2	Num lock	**Blue:**	The numeric keypad on the keyboard is enabled. To enable or disable the keypad, press and hold the Shift key, and press the NmLk key.

Table 8. Status indicators (continued)

Indicator	Meaning
3 Drive in use	**Blue:** Data is being read from or written to the hard disk drive, the solid state drive, or the optical disk drive. When this indicator is on, do not put the computer into standby mode or turn off the computer. **Note:** Do not move the system while the blue drive-in-use light is on. Sudden physical shock could cause drive errors.
4 Power	**Blue:** The computer is on and ready to use. This indicator stays on whenever the computer is on and is not in standby mode. **Blinking blue:** The computer is in standby mode.
5 Battery status	**Blue:** The battery is charged to 95% or more of its capacity. **Blinking blue:** The battery is being trickle-charged. **Orange:** The battery is being normally charged. **Off:** The computer is operating on battery power, and the battery has enough power. **Blinking orange:** The computer is operating on battery power, and the battery is charged to no more than 8% of capacity.
6 Wireless status	**IdeaPad S9e and S10e:** **Purple:** The wireless LAN and the *Bluetooth* features are on, and the radio link is ready for use. **Orange:** The *Bluetooth* feature is on, and the radio link is ready for use. **Blue:** The wireless LAN feature is on, and the radio link is ready for use. **Blinking blue:** The wireless LAN feature is on, and the networks are being scanned.
	IdeaPad S10: **Blue:** Any one of the wireless features — wireless LAN, wireless WAN, and *Bluetooth* — is on, and the radio link is ready for use. **Blinking blue:** Any one of the wireless features is on, and the networks are being scanned.

FRU tests

The following table shows the test for each FRU.

Table 9. FRU tests

FRU	Applicable test
System board	1. **Diagnostics** --> **CPU/Coprocessor** 2. **Diagnostics** --> **Systemboard**
LCD unit	1. **Diagnostics** --> **Video Adapter** 2. **Interactive Tests** --> **Video**
Keyboard	1. **Diagnostics** --> **Systemboard** --> **Keyboard** 2. **Interactive Tests** --> **Keyboard**
Hard disk drive	**Diagnostics** --> **Fixed Disks**
Diskette drive	**Diagnostics** --> **Diskette Drives**
Optical drive	1. **Diagnostics** --> **Other Devices**--> **Optical Drive** 2. **Interactive Tests** --> **Optical Drive Test**
Memory	**Diagnostics** --> **PM Memory**
Touch Pad	**Interactive Tests** --> **Mouse**

Fn key combinations

The following table shows the function of each combination of Fn with a function key.

Table 10. Fn key combinations

Key combination	Description
Fn+Esc	Turn on or off the integrated camera.
Fn+F1	Put the computer in standby mode. To return to normal operation, press the power button or the Fn key, without pressing a function key.
Fn+F2	Turn off or on the LCD screen.
Fn+F3	Shift to other connected display devices.
Fn+F4	Reserved.
Fn+F5	Enable or disable the built-in wireless networking features and the *Bluetooth* features. If you press Fn+F5, a list of wireless features is displayed. You can quickly change the power state of each feature in the list.
Fn+F6	Enable or disable the touch pad.
Fn+F7/NmLk	Enable or disable the numeric keypad.
Fn+F8/ScrLk	Enable or disable Scroll Lock.
Fn+F9/Break	Activate the Break function.
Fn+F10/Pause	Activate the Pause function.
Fn+F11/F12	Activate the F12 function.
Fn+PgUp/Home	Activate the Home function.
Fn+PgDn/End	Activate the End function.
Fn+Ins/SysRq	Activate the System Request.
Fn+up/down arrow	Increase or decrease display brightness.
Fn+right/left arrow	Increase or decrease computer volume.

FRU replacement notices

This section contains notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the IdeaPad computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Each one should be used only once.

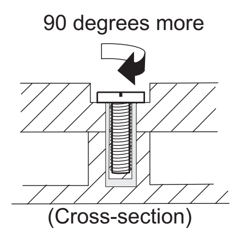
Do the following when you service this machine:

- Keep the screw kit (for the P/N, see “Miscellaneous parts” on page 123) in your tool bag.
- Always use new screws.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

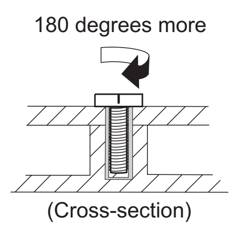
- **Plastic to plastic**

  Turn an additional **90 degrees** after the screw head touches the surface of the plastic part:



- **Logic card to plastic**

  Turn an additional **180 degrees** after the screw head touches the surface of the logic card:



- **Torque driver**

  If you have a torque driver, refer to the “Torque” column for each step.
- Make sure that you use the correct screw. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Never use a screw that you removed. Use a new one. Make sure that all of the screws are tightened firmly.**
- Ensure torque screw drivers are calibrated correctly following country specifications.

Retaining serial numbers

This section includes the following descriptions:

- "Restoring the Product Name and the P/N (part number) of the system unit"
- "Retaining the UUID"

Restoring the Product Name and the P/N (part number) of the system unit

When the computer was manufactured, the EEPROM on the system board was loaded with the Product Name and the P/N (part number) of the system unit. These numbers need to remain the same throughout the life of the computer.

If you replace the system board, you must restore the Product Name and the P/N of the system unit to their original values.

Table 11. the Product Name and the P/N

BIOS menu text	Meaning
Product Name	Four digits for the machine type and three digits of the model
P/N	The seven-digit serial number of the system unit

Before replacing the system board, find the original Product Name and P/N by doing the following:

1. Boot the computer with DOS.
2. To see the Product Name, run the maintenance utility, FL1RW.EXE as follows:

   > FL1RW.EXE /r MM
3. To see the P/N, run the maintenance utility, FL1RW.EXE as follows:

   > FL1RW.EXE /r SN
4. Write down the result of each of these procedures.

Note: The Product Name and the P/N of the system unit are also written on the label attached to the bottom of the computer.

After you have replaced the system board, restore the Product Name and the P/N by doing the following:

1. Boot the computer with DOS.
2. To restore the product name, run the maintenance utility, FL1RW.EXE with the '/w MM' option as the following example.

   If the product name is ″4068xxx,″ type the following command:

   > FL1RW.EXE /w MM ″4068xxx″
3. To restore the P/N, run the maintenance utility, FL1RW.EXE with the '/w SN' option as the following example.

   If the P/N is ″LxxNNNN,″ type the following command:

   > FL1RW.EXE /w SN ″LxxNNNN″

Retaining the UUID

The Universally Unique Identifier (UUID) is a 128-bit number uniquely assigned to your computer at production and stored in the EEPROM of your system board. The algorithm that generates the number is designed to provide unique IDs until the year A.D. 3400. No two computers in the world have the same number.

When you replace the system board, you must set the UUID on the new system board as follows:

1. Boot the system with DOS.
2. Run the maintenance utility, FL1RW.EXE as follows:

   > FL1RW.EXE /w UU

   A new UUID is created and written. If a valid UUID already exists, it is not overwritten.

Removing and replacing a FRU

This section presents directions and drawings for use in removing and replacing a FRU. Be sure to observe the following general rules:

1. Do not try to service any computer unless you have been trained and certified. An untrained person runs the risk of damaging parts.
2. Before replacing any FRU, review “FRU replacement notices” on page 51.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence in the steps for removing the FRU, as given in the drawings by the numbers in square callouts.
5. When turning a screw to replace a FRU, turn it in the direction as given by the arrow in the drawing.
6. When removing the FRU, move it in the direction as given by the arrow in the drawing.
7. To put the new FRU in place, reverse the removal procedure and follow any notes that pertain to replacement. For information about connecting and arranging internal cables, see “Locations” on page 104.
8. When replacing a FRU, use the correct screw as shown in the procedures.

⚠ **DANGER**

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Attention: After replacing a FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or by using an electrostatic discharge (ESD) strap (P/N 6405959).

Before servicing IdeaPad S9e, S10e, and S10

Table 12. Before servicing IdeaPad S9e, S10, and S10e

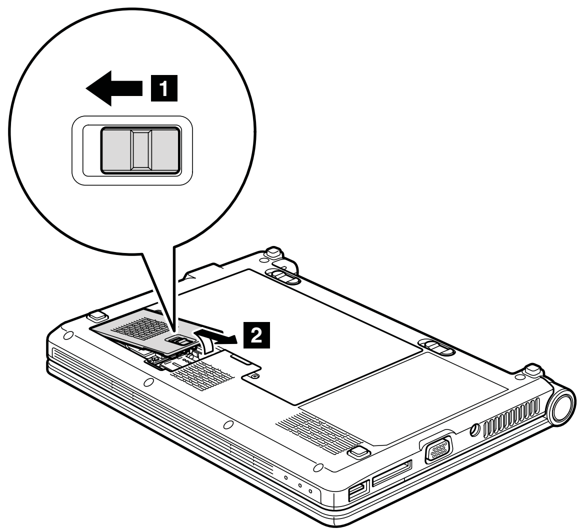
Removing the SIM card:

Some models of IdeaPad S10 you are servicing might have the SIM card that the customer has been installed.

If the computer you are servicing has the SIM card, remove it before you start the servicing.

To remove the SIM card, you need to remove the battery pack first. (See "1010 Battery pack" on page 57).

After you finish the servicing, make sure that you insert the card back into the slot firmly.



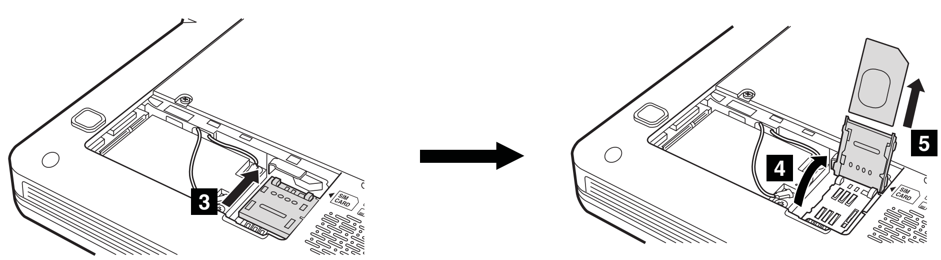
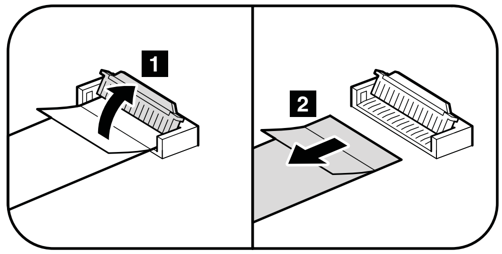


Table 12. Before servicing IdeaPad S9e, S10, and S10e (continued)

Notice on disconnecting the cable from flip-lock ZIF connector:

Some cables used in IdeaPad S9e, S10e, and S10 are connected to the flip-lock ZIF connectors.

When disconnecting the cable from those connectors, do as shown in this figure.



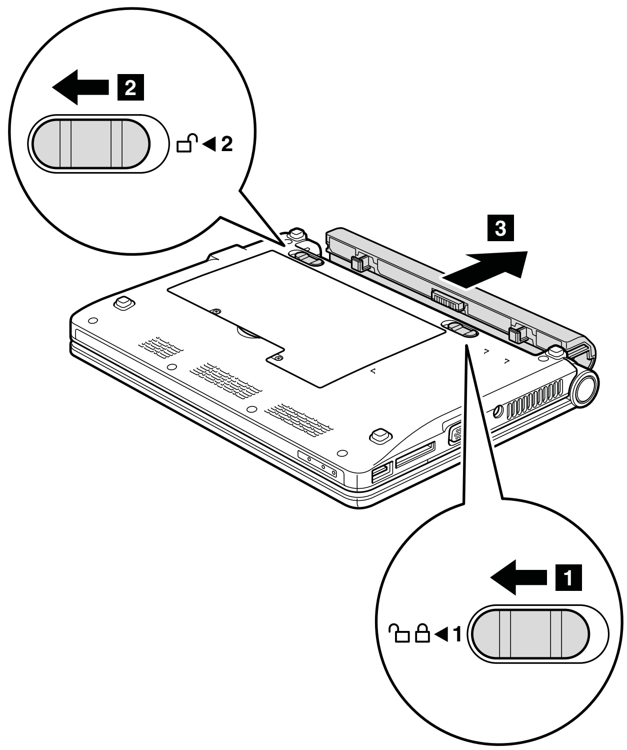
1010 Battery pack

⚠ **DANGER**

Use only the battery specified in the parts list for your computer. Any other battery could ignite or explode.

Table 13. Removal steps of battery pack

Unlock the battery release lever **1**. Holding the battery release lever in the unlocked position **2**, remove the battery pack in the direction shown by arrow **3**.

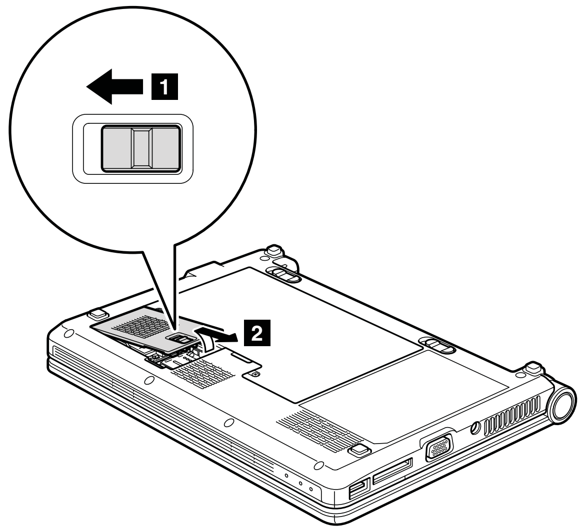


When installing: Install the battery pack along the slide rails of the slot. Then make sure that the battery release lever is in the locked position.

1020 Wireless WAN/SIM door

For access, remove this FRU:
- "1010 Battery pack" on page 57

Table 14. Removal steps of Wireless WAN/SIM door



1030 Hard disk drive (HDD)

For access, remove this FRU:
- “1010 Battery pack” on page 57

Attention:
- **Do not drop the hard disk drive or apply any physical shock to it.** The hard disk drive is sensitive to physical shock. Improper handling can cause damage and permanent loss of data.
- Before removing the drive, have the user make a backup copy of all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.

Table 15. Removal steps of HDD

Note: Loosen the screws **1**, but do not remove them.

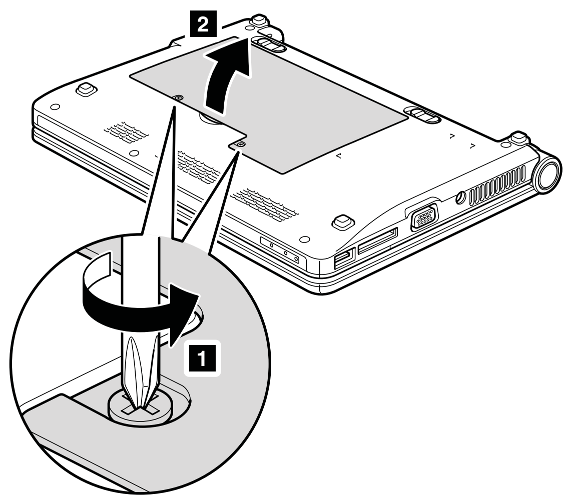
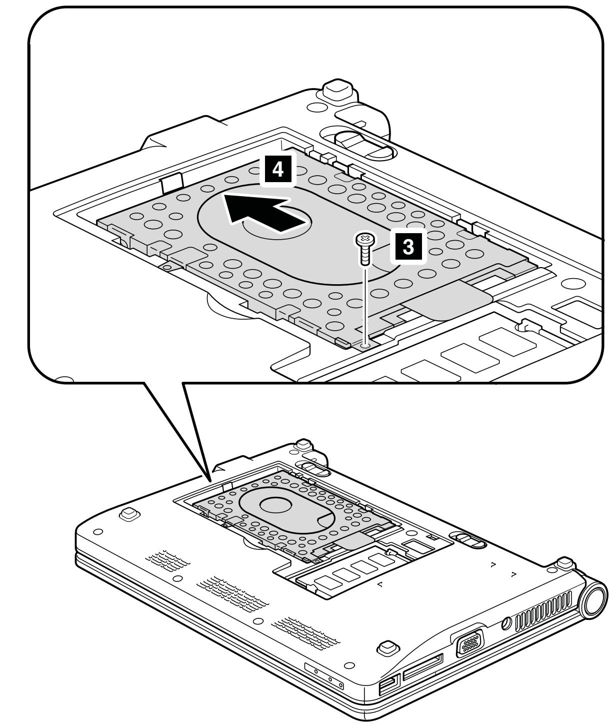
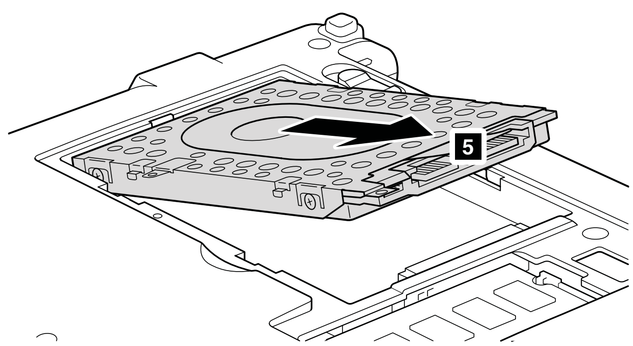


Table 15. Removal steps of HDD (continued)

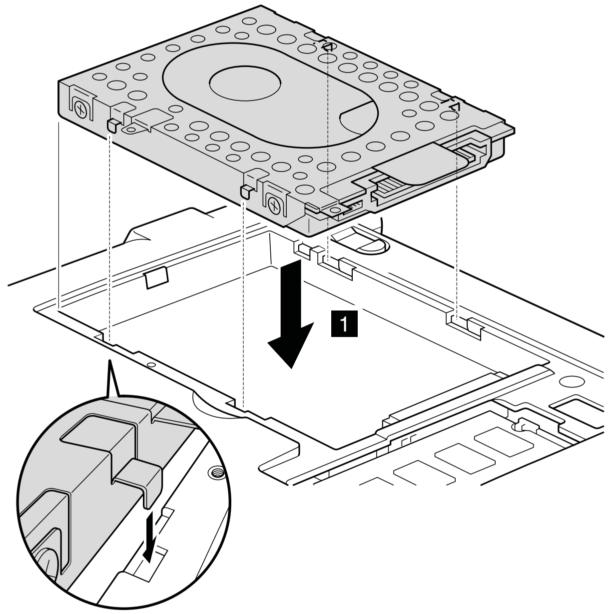
Step **3** is only for IdeaPad S10. For IdeaPad S9e and S10e, skip step **3**.





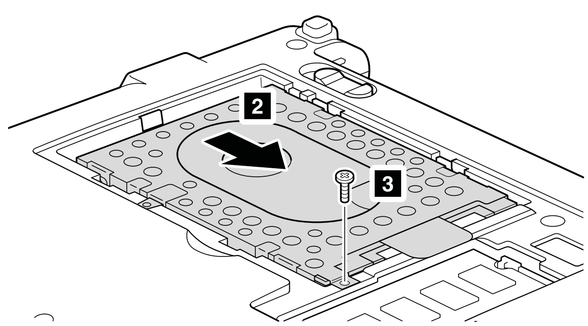
When installing:

1. Align the HDD as shown in this figure, and then place it downward.



2. Slide the HDD in the direction of the arrow.

Step **3** is only for IdeaPad S10. For IdeaPad S9e and S10e, skip step **3**.



3. Close the HDD door, and then fasten the screws.

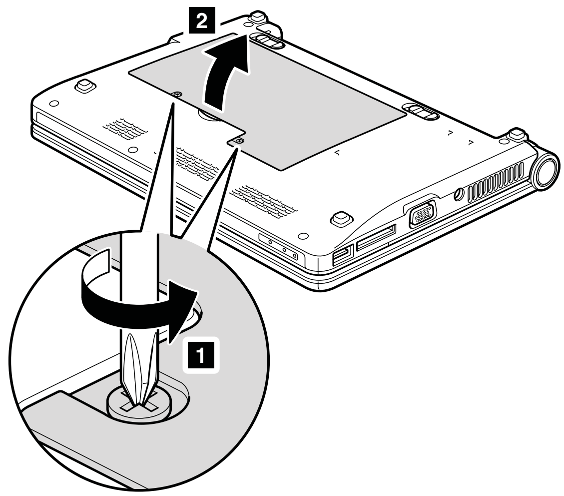
1040 DIMM

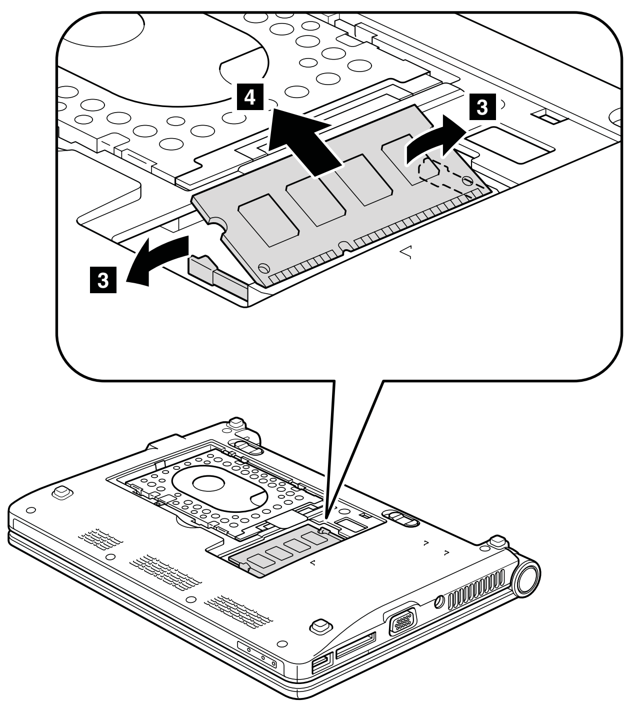
For access, remove this FRU in order:

- "1010 Battery pack" on page 57

Table 16. Removal steps of dimm

Note: Loosen the screws **1**, but do not remove them.





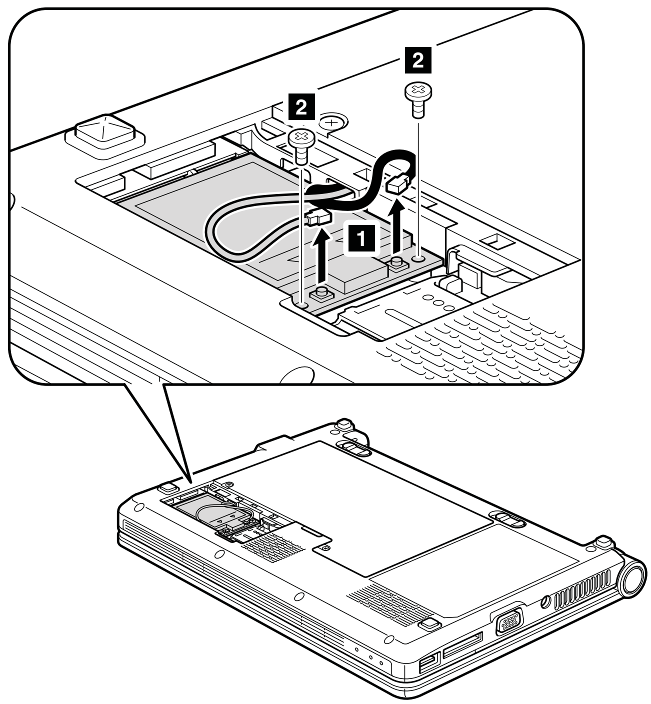
When installing: Insert the notched end of the DIMM into the socket. Press the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and does not move easily.

1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)

For access, remove these FRUs in order:
- “1010 Battery pack” on page 57
- “1020 Wireless WAN/SIM door” on page 58

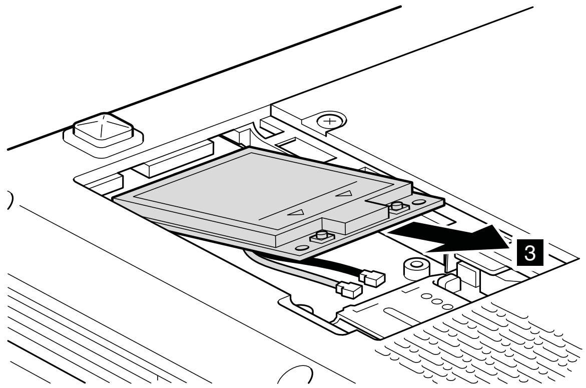
Table 17. Removal steps of PCI Express Mini Card for wireless WAN (for IdeaPad S10)

In step **1**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159) or pick the connectors with your fingers and gently unplug them in direction of the arrow.



Step	Screw (quantity)	Color	Torque
2	M2 × 2.5 mm, wafer-head, nylon-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

Table 17. Removal steps of PCI Express Mini Card for wireless WAN (for IdeaPad S10) (continued)

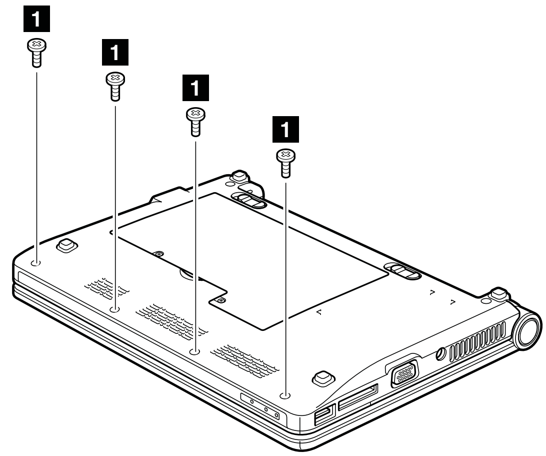


When installing: Plug the black cable into the jack labeled **MAIN** on the card, and the gray cable into the jack labeled **AUX**.

1060 Palm rest assembly

For access, remove this FRU in order:
- "1010 Battery pack" on page 57

Table 18. Removal steps of palm rest assembly



Step	Screw (quantity)	Color	Torque
1	M2 × 6 mm, wafer-head, nylon-coated (5)	Black	0.181 Nm (1.85 kgfcm)

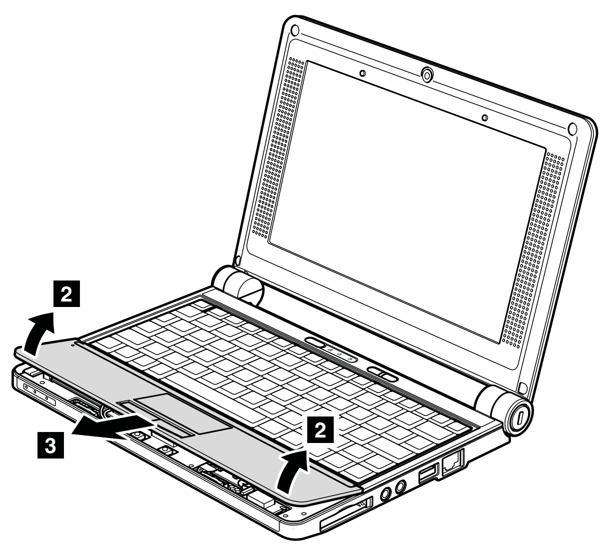
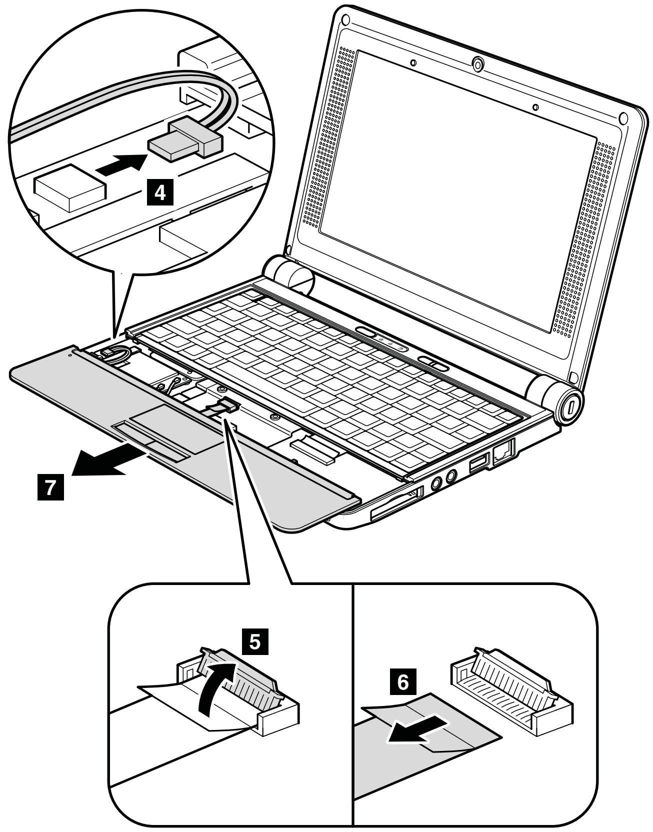


Table 18. Removal steps of palm rest assembly (continued)



Turn the palm rest over, and then disconnect the cable from the flip-lock ZIF connector.

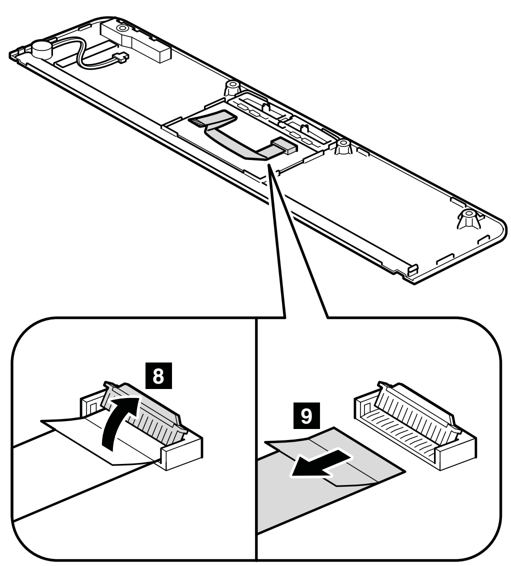
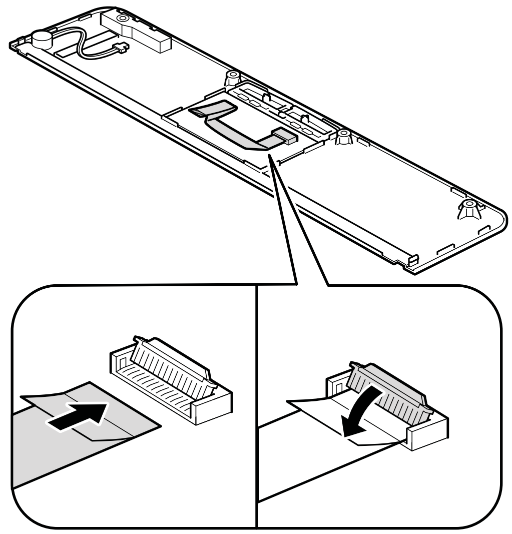


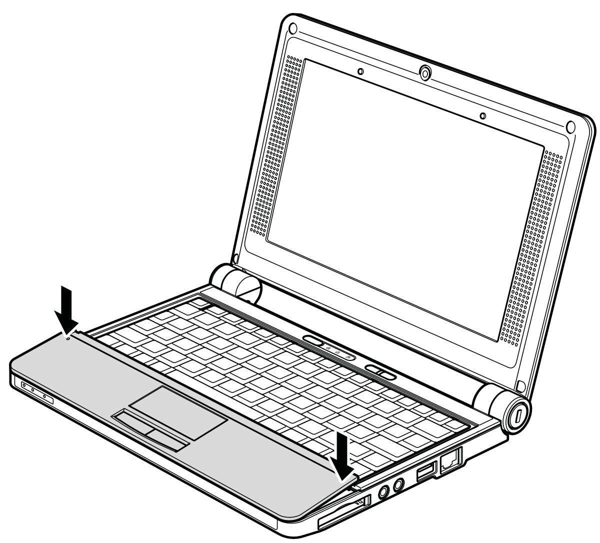
Table 18. Removal steps of palm rest assembly (continued)

When installing:

1. Attach the touch pad cable to the flip-lock ZIF connector on the palm rest.



2. Attach the touch pad cable to the flip-lock ZIF connector on the system board.
3. Attach the microphone connector firmly to the system board.
4. Attach the front side of the palm rest to the front side of the base cover.
5. Press the left and right top edges of the palm rest to fit it into place.



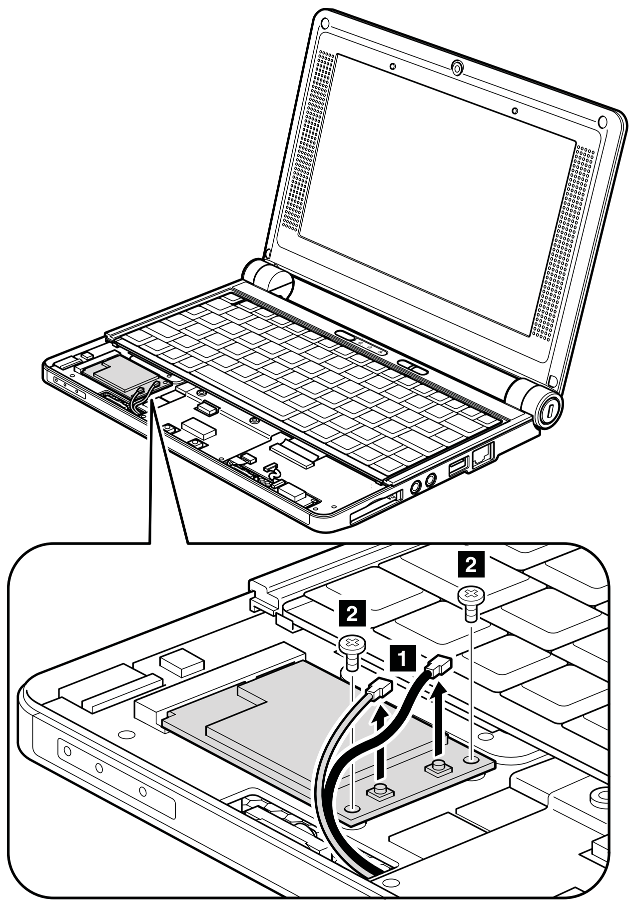
6. Close the LCD cover and turn the computer over. Then fasten the four screws to secure the palm rest.

1070 PCI Express Mini Card for wireless LAN

For access, remove these FRUs in order:
- "1010 Battery pack" on page 57
- "1060 Palm rest assembly" on page 65

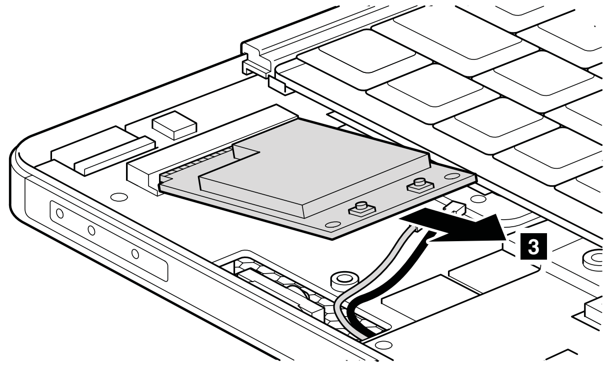
Table 19. Removal steps of PCI Express Mini Card for wireless LAN

In step **1**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159) or pick the connectors with your fingers and gently unplug them in direction of the arrow.



Step	Screw (quantity)	Color	Torque
2	M2 × 2.5 mm, wafer-head, nylon-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

Table 19. Removal steps of PCI Express Mini Card for wireless LAN (continued)

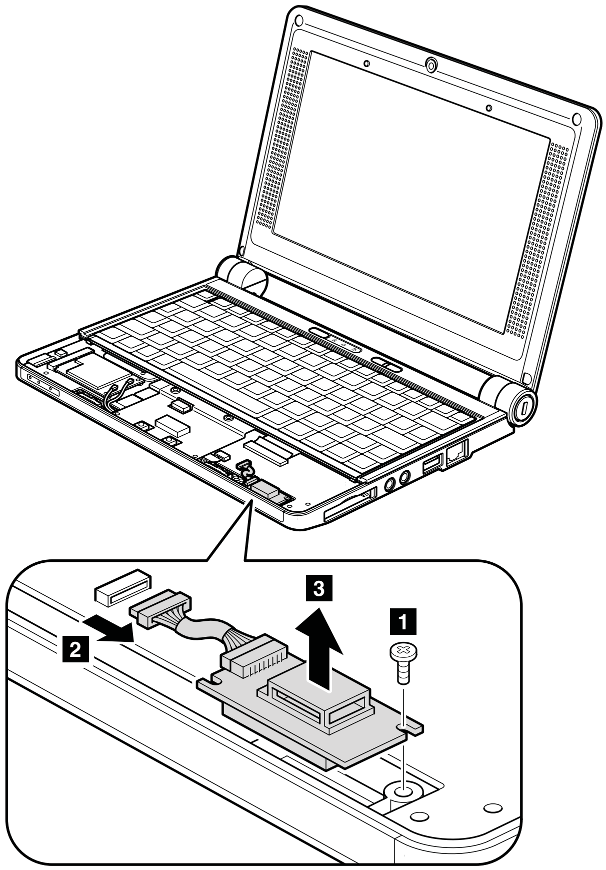


When installing: Plug the black cable into the jack labeled **MAIN** or **1** on the card, and the gray cable into the jack labeled **AUX** or **2**.

1080 *Bluetooth* daughter card and *Bluetooth* cable

For access, remove these FRUs in order:
- "1010 Battery pack" on page 57
- "1060 Palm rest assembly" on page 65

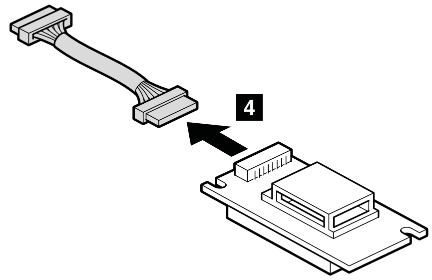
Table 20. Removal steps of Bluetooth daughter card and Bluetooth cable



Step	Screw (quantity)	Color	Torque
1	M2 × 4 mm, wafer-head, nylon-coated (1)	Silver	0.181 Nm (1.85 kgfcm)

When installing: Make sure that the connector 2 is attached firmly.

Table 20. Removal steps of Bluetooth daughter card and Bluetooth cable (continued)



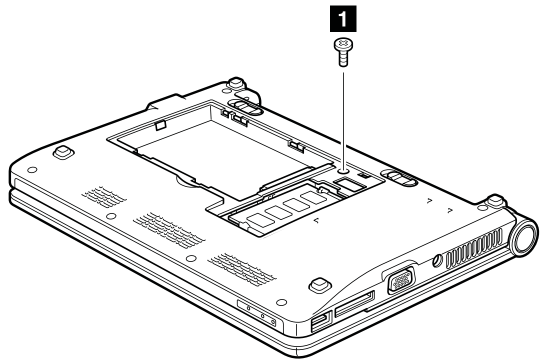
When installing: Make sure that the connector **4** is attached firmly.

1090 Keyboard

For access, remove this FRU in order:

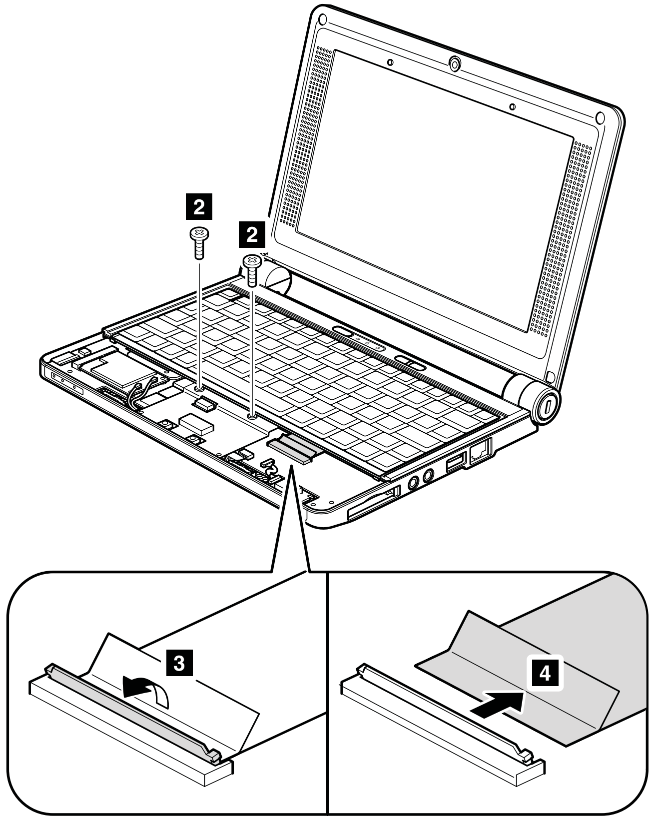
- "1010 Battery pack" on page 57
- "1030 Hard disk drive (HDD)" on page 59
- "1060 Palm rest assembly" on page 65

Table 21. Removal steps of keyboard



Step	Screw (quantity)	Color	Torque
1	M2 × 6 mm, wafer-head, nylon-coated (1)	Black	0.181 Nm (1.85 kgfcm)

Table 21. Removal steps of keyboard (continued)



Step	Screw (quantity)	Color	Torque
2	M2 × 2.5 mm, wafer-head, nylon-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

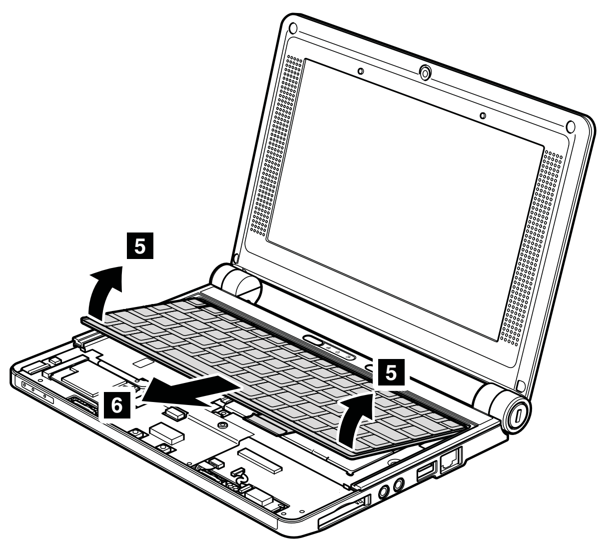
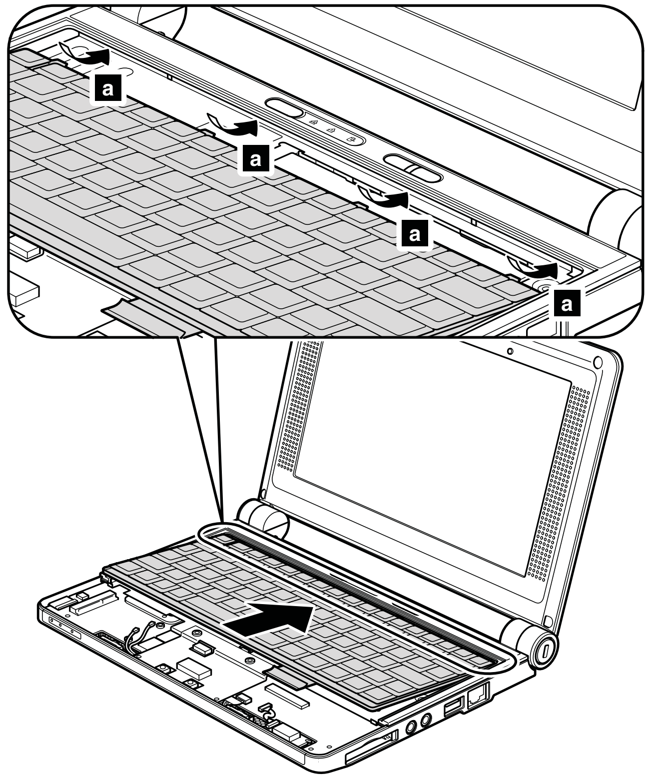


Table 21. Removal steps of keyboard (continued)

When installing: Make sure that the keyboard edges **a** are under the frame as shown in this figure. Then press the keys to latch the keyboard firmly in place.

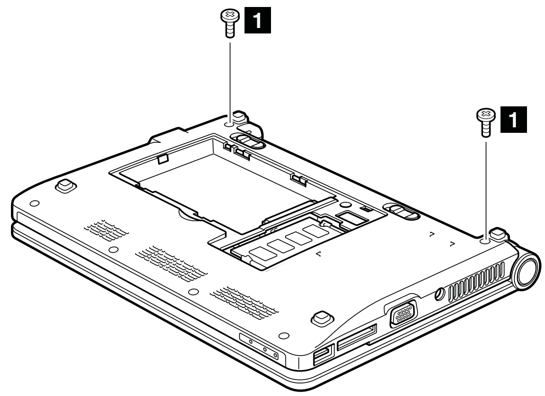


1100 Keyboard bezel

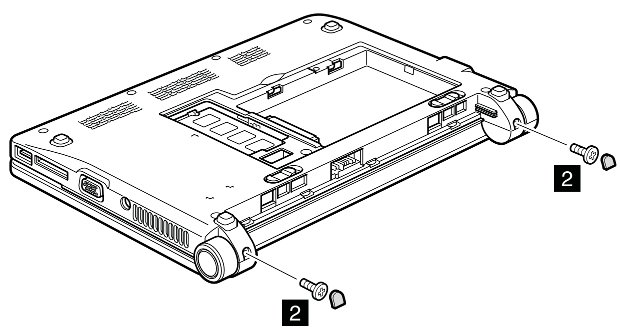
For access, remove these FRUs in order:

- “1010 Battery pack” on page 57
- “1030 Hard disk drive (HDD)” on page 59
- “1060 Palm rest assembly” on page 65
- “1090 Keyboard” on page 72

Table 22. Removal steps of keyboard bezel

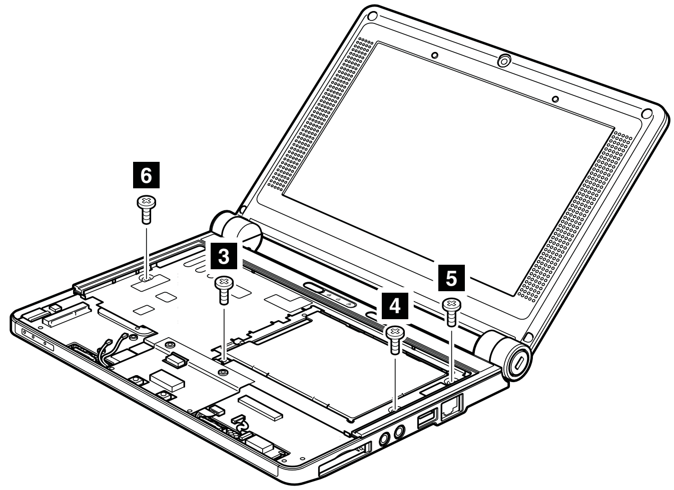


Step	Screw (quantity)	Color	Torque
1	M2 × 6 mm, wafer-head, nylon-coated (2)	Black	0.181 Nm (1.85 kgfcm)



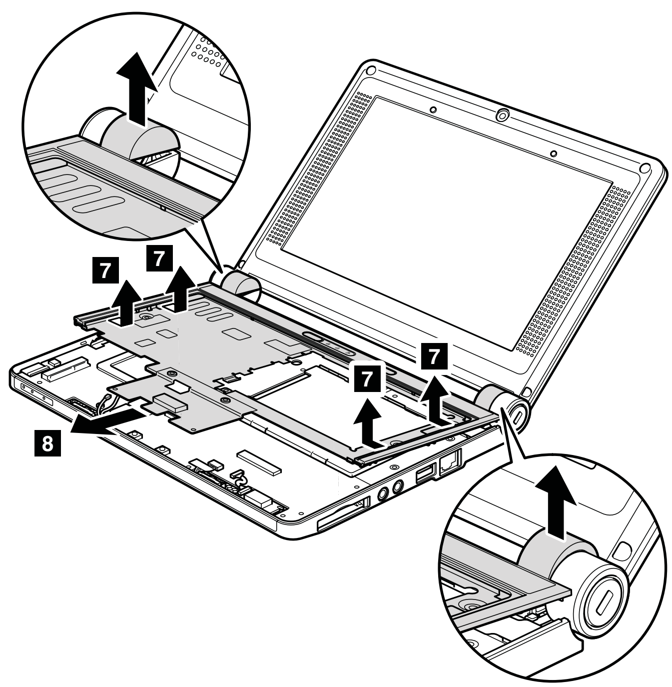
Step	Screw cap	Screw (quantity)	Color	Torque
2		M2 × 4 mm, wafer-head, nylon-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

Table 22. Removal steps of keyboard bezel (continued)



Step	Screw (quantity)	Color	Torque
3 - 6	M2 × 6 mm, wafer-head, nylon-coated (2)	Black	0.181 Nm (1.85 kgfcm)

In step 7, detach the claws. Then remove the keyboard bezel in the direction shown by arrow 8.



When installing: Make sure that all the claws are attached firmly.

1110 Fan, backup battery, and system board

For access, remove these FRUs in order:

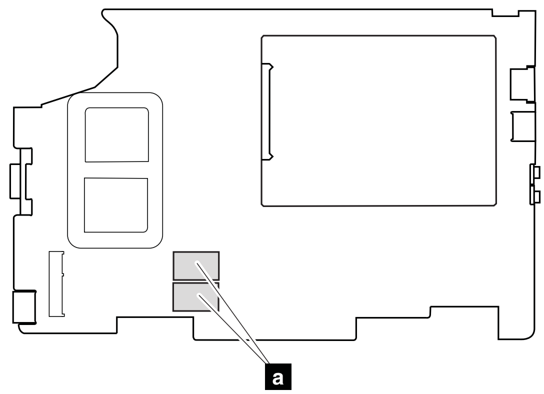
- “1010 Battery pack” on page 57
- “1020 Wireless WAN/SIM door” on page 58
- “1030 Hard disk drive (HDD)” on page 59
- “1040 DIMM” on page 62
- “1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)” on page 63
- “1060 Palm rest assembly” on page 65
- “1070 PCI Express Mini Card for wireless LAN” on page 68
- “1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable” on page 70
- “1090 Keyboard” on page 72
- “1100 Keyboard bezel” on page 75

Table 23. Removal steps of fan assembly

Following components soldered on the system board are extremely sensitive. When you service the system board, avoid any kind of rough handling.

a	SSD (Solid State Drive) (some models of IdeaPad S9e and S10e)
b	ICH (I/O Controller Hub)
c	On-board memory
d	CPU
e	MCH (Memory Controller Hub)
f	SSD controller (some models of IdeaPad S9e and S10e)

Top



Bottom

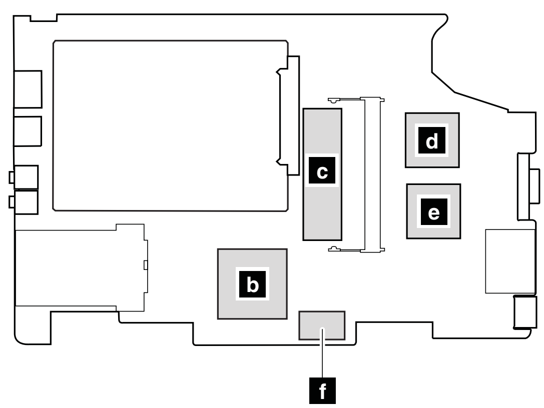
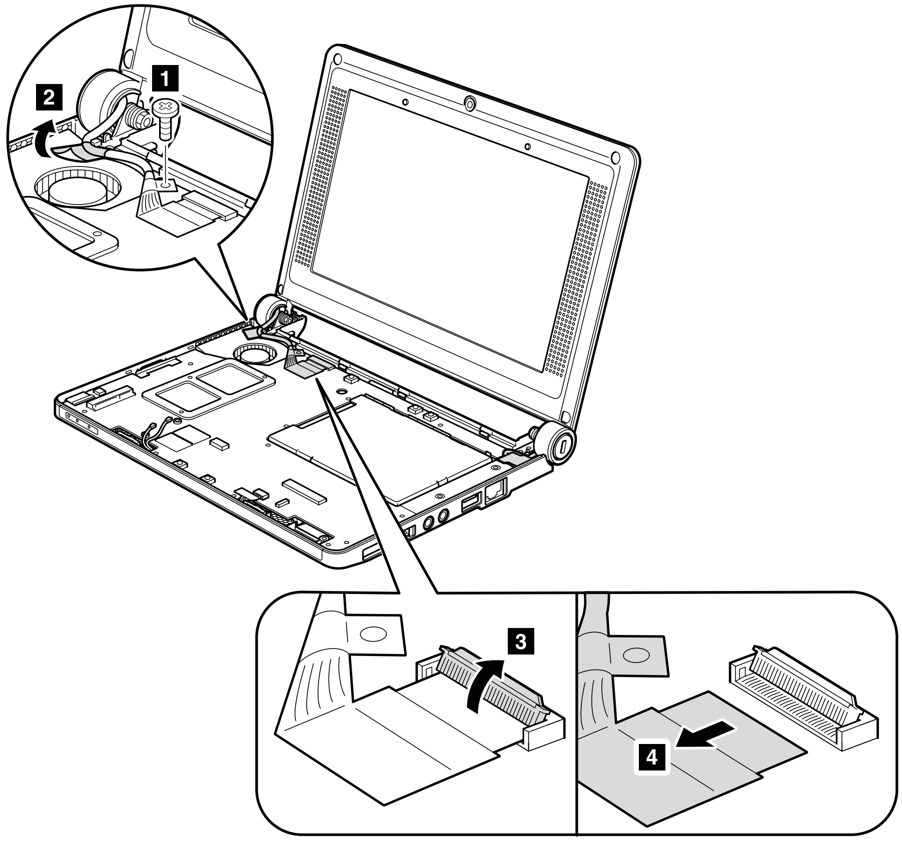


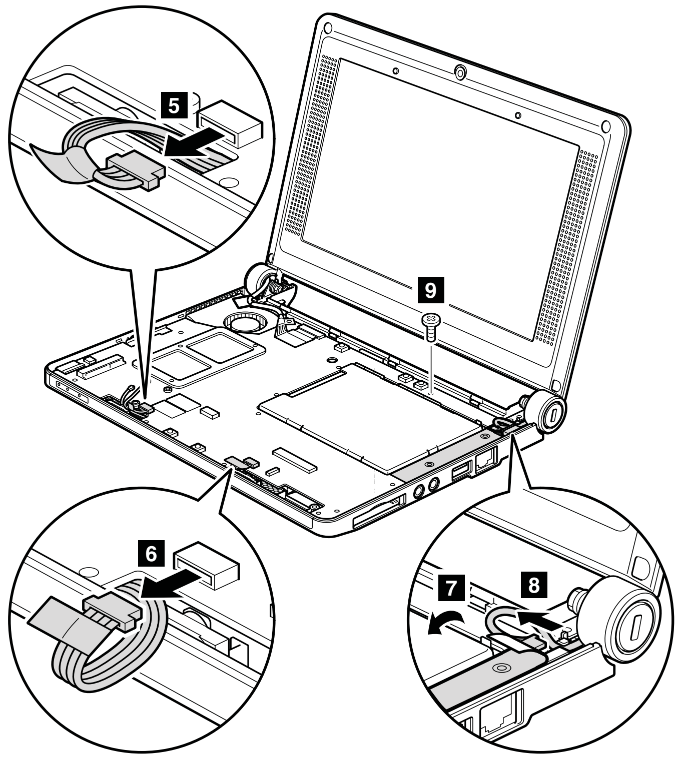
Table 23. Removal steps of fan assembly (continued)



Step	Screw (quantity)	Color	Torque
1	M2 × 4 mm, wafer-head, nylon-coated (1)	Silver	0.181 Nm (1.85 kgfcm)

Table 23. Removal steps of fan assembly (continued)

Step 5 is only for IdeaPad S10. For IdeaPad S9e and S10e, skip step 5.

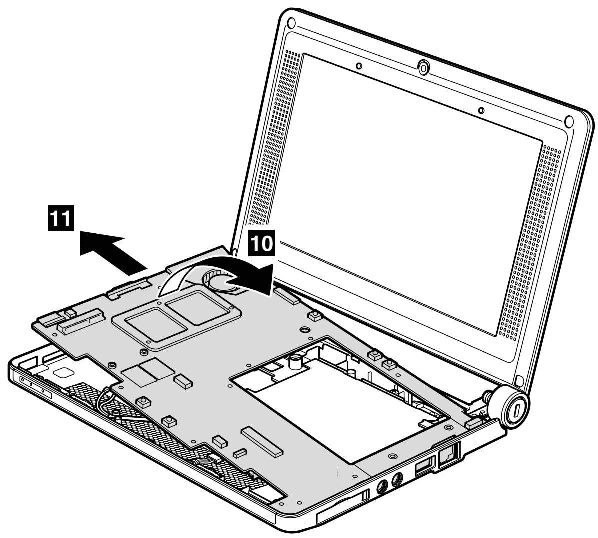


Step	Screw (quantity)	Color	Torque
9	M2 × 4 mm, wafer-head, nylon-coated (1)	Silver	0.181 Nm (1.85 kgfcm)

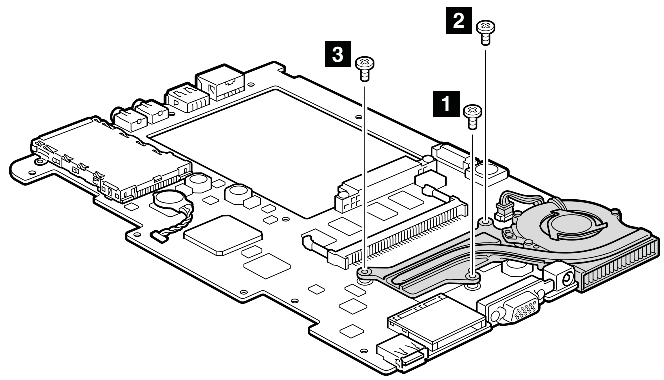
When installing: Make sure that the connectors are attached to the system board firmly.

Table 23. Removal steps of fan assembly (continued)

In step **11**, remove the system board and the fan assembly together from the base cover assembly.

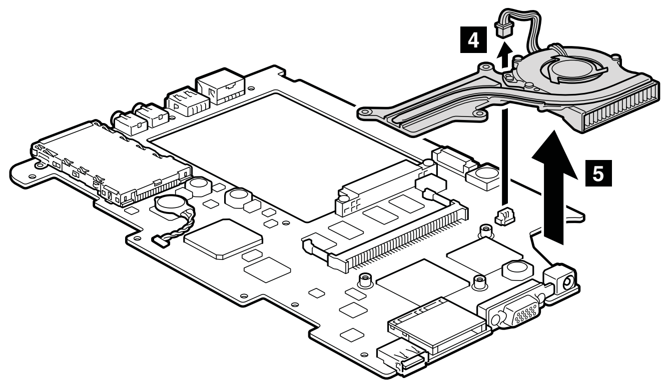


Note: The fan assembly is attached to the underside of the system board.



Step	Screw (quantity)	Color	Torque
1 - 3	M2 × 4 mm, wafer-head, nylon-coated (3)	Silver	0.181 Nm (1.85 kgfcm)

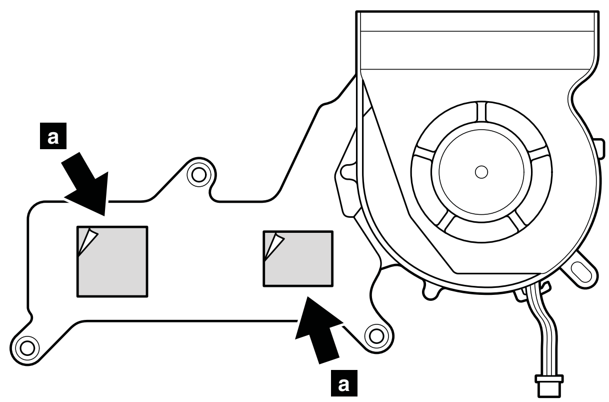
Table 23. Removal steps of fan assembly (continued)



When installing: Make sure that the fan connector is attached to the system board firmly.

When installing:

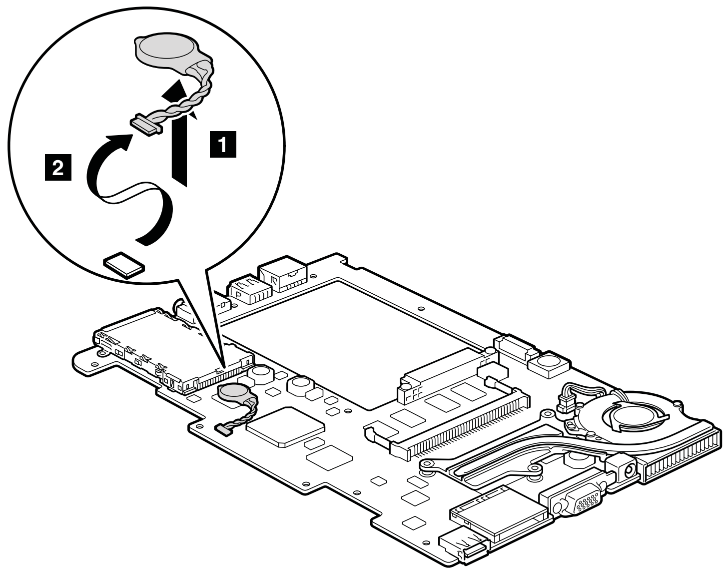
- Before you attach the fan assembly to the computer, peel the thin film off from the rubber **a**.



⚠ **DANGER**

Use only the battery specified in the parts list for your computer. Any other battery could ignite or explode.

Table 24. Removal steps of backup battery and system board



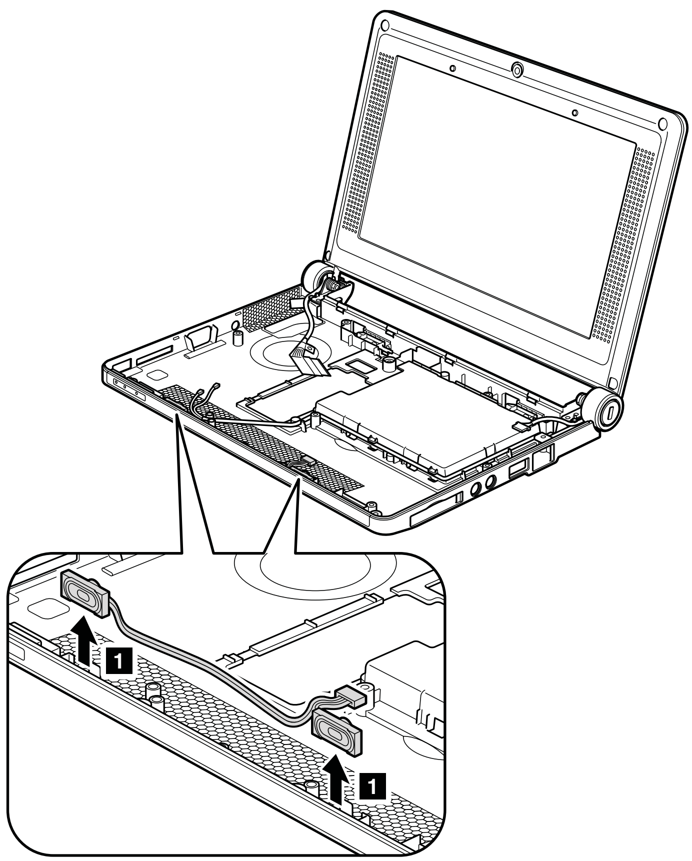
When installing: Make sure that the battery connector is attached firmly.

1120 Speaker assembly

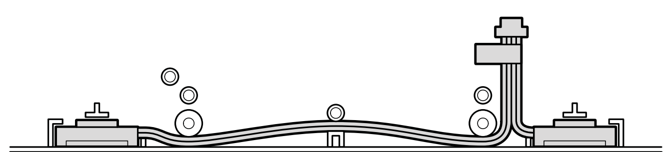
For access, remove these FRUs in order:

- “1010 Battery pack” on page 57
- “1020 Wireless WAN/SIM door” on page 58
- “1030 Hard disk drive (HDD)” on page 59
- “1040 DIMM” on page 62
- “1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)” on page 63
- “1060 Palm rest assembly” on page 65
- “1070 PCI Express Mini Card for wireless LAN” on page 68
- “1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable” on page 70
- “1090 Keyboard” on page 72
- “1100 Keyboard bezel” on page 75
- “1110 Fan, backup battery, and system board” on page 77

Table 25. Removal steps of speaker and base cover assembly



When installing: Route the speaker cables as shown in this figure.



1130 Second fan assembly (for IdeaPad S10)

For access, remove these FRUs in order:

- "1010 Battery pack" on page 57
- "1020 Wireless WAN/SIM door" on page 58
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77

Table 26. Removal steps of second fan assembly

In step **1**, release the cable from the cable guide of the rear cover.

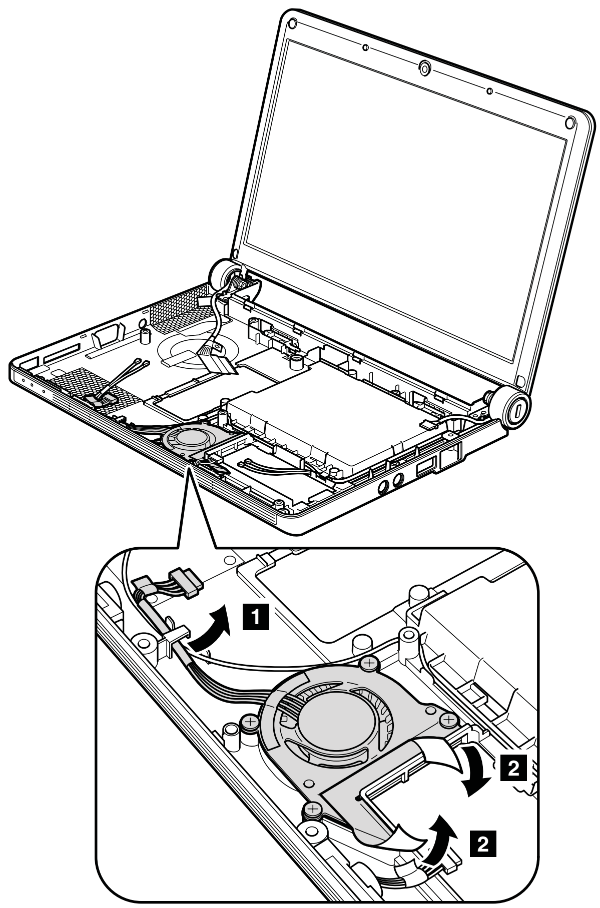
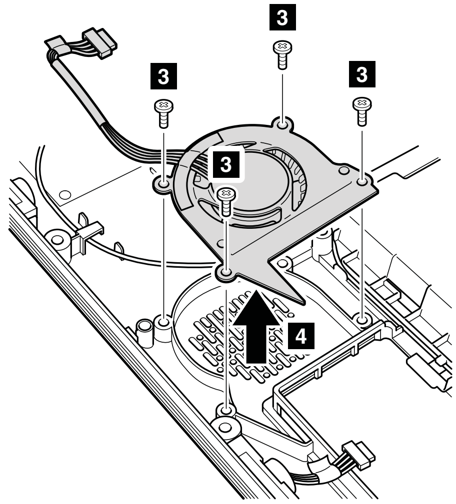
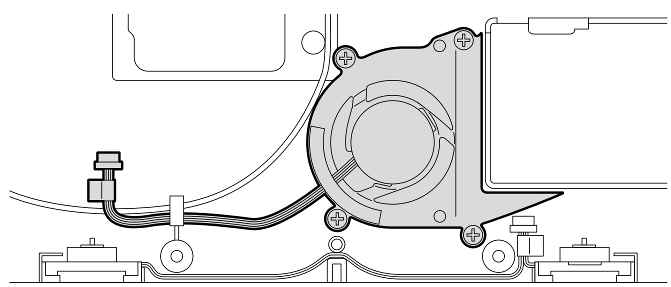


Table 26. Removal steps of second fan assembly (continued)



Step	Screw (quantity)	Color	Torque
3	M2 × 2.5 mm, wafer-head, wafer-coated (4)	Silver	0.181 Nm (1.85 kgfcm)

When installing: Route the fan cable as shown in this figure.



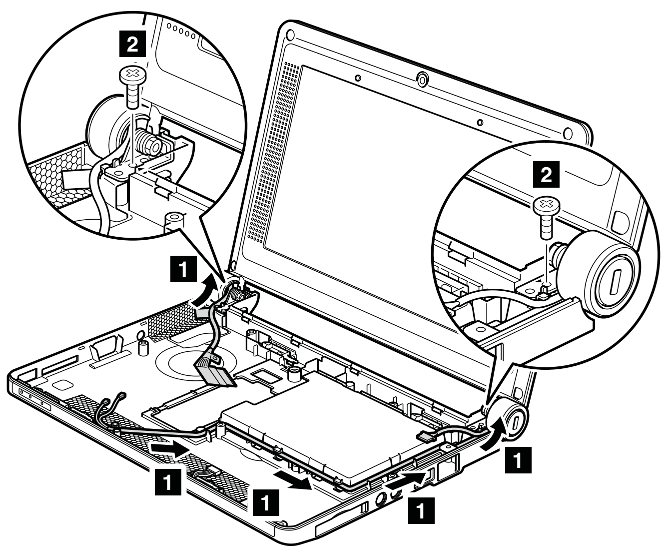
1140 LCD assembly (for IdeaPad S9e and S10e)

For access, remove these FRUs in order:

- "1010 Battery pack" on page 57
- "1020 Wireless WAN/SIM door" on page 58
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77

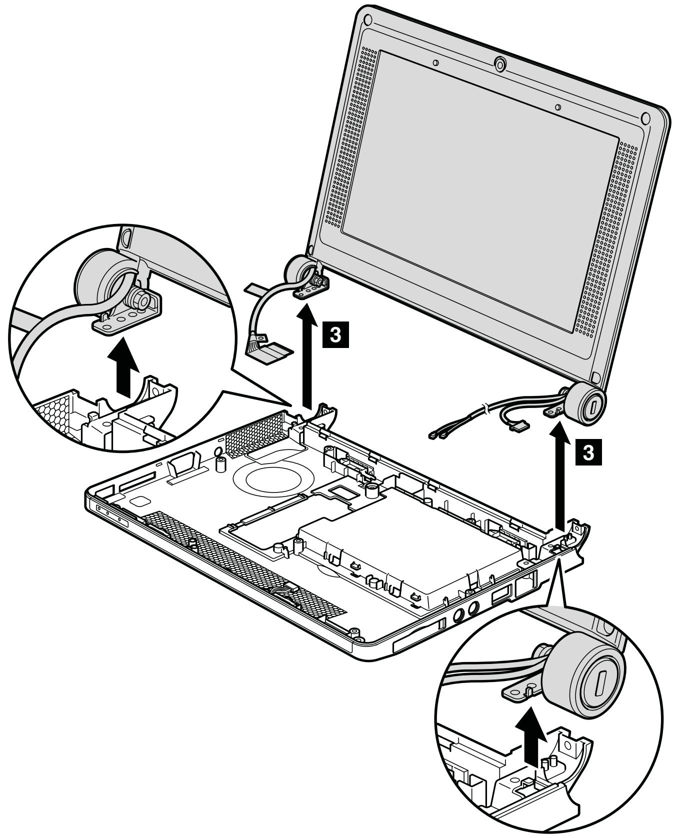
Table 27. Removal steps of LCD assembly (for IdeaPad S9e and S10e)

In step **1**, release the cables from the cable guides of the base cover.

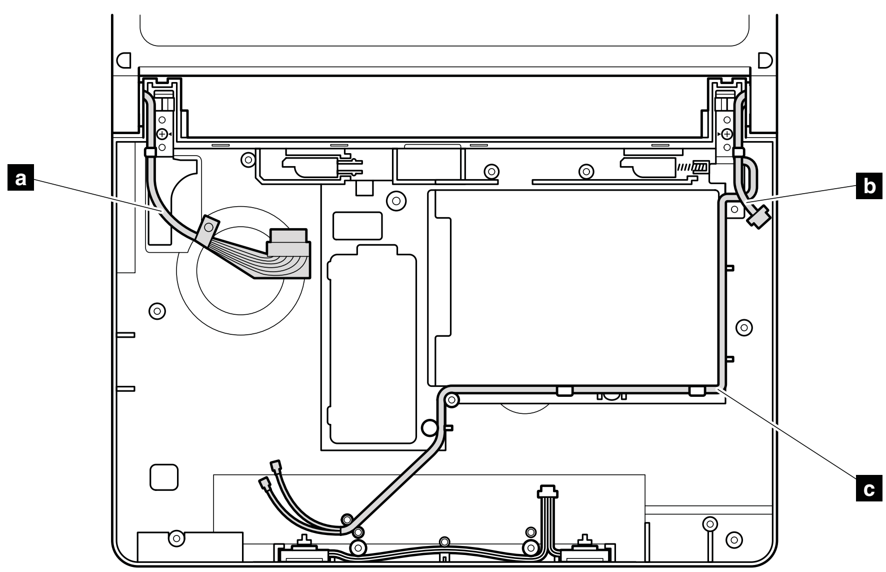


Step	Screw (quantity)	Color	Torque
2	M2 × 4 mm, wafer-head, nylon-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

Table 27. Removal steps of LCD assembly (for IdeaPad S9e and S10e) (continued)



When installing: Route the LCD cable (**a**), the camera cable (**b**), and the wireless LAN antenna cables (**c**) along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.



Applying labels to the base cover:
The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following labels:

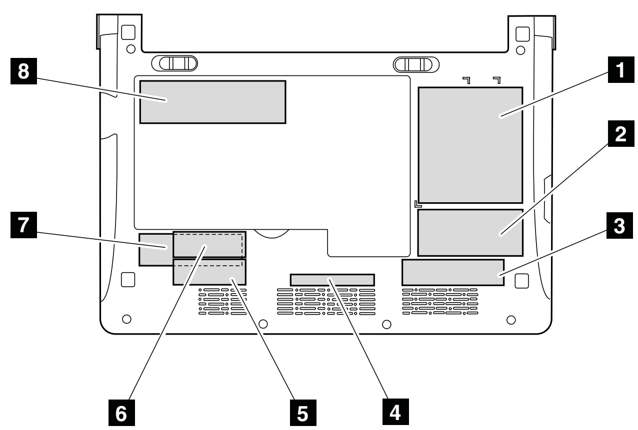
1 Product label
2 Homologation label

Following labels need to be peeled off from the old base cover, and need to be put on the new base cover.

3 Serial number label
4 MAC address label
5 Brazil label (wireless LAN)
6 Brazil label (*Bluetooth*)
7 China label or Israel label
8 Windows license label (COA)

For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

For the location of each label, refer the following figure:



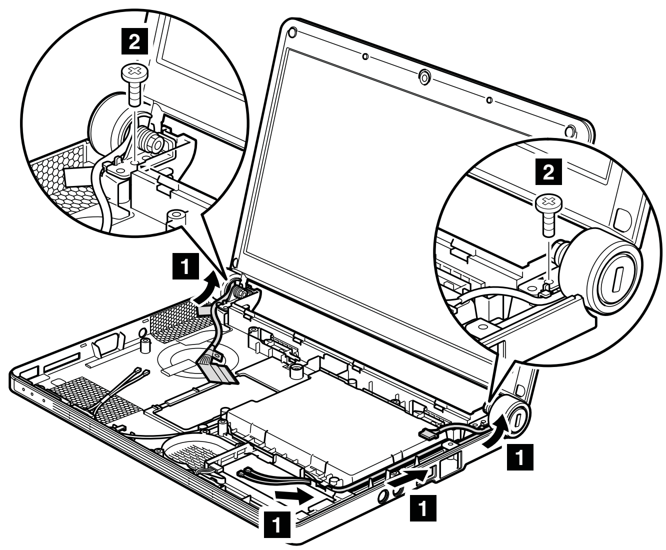
1150 LCD assembly (for IdeaPad S10)

For access, remove these FRUs in order:

- "1010 Battery pack" on page 57
- "1020 Wireless WAN/SIM door" on page 58
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77

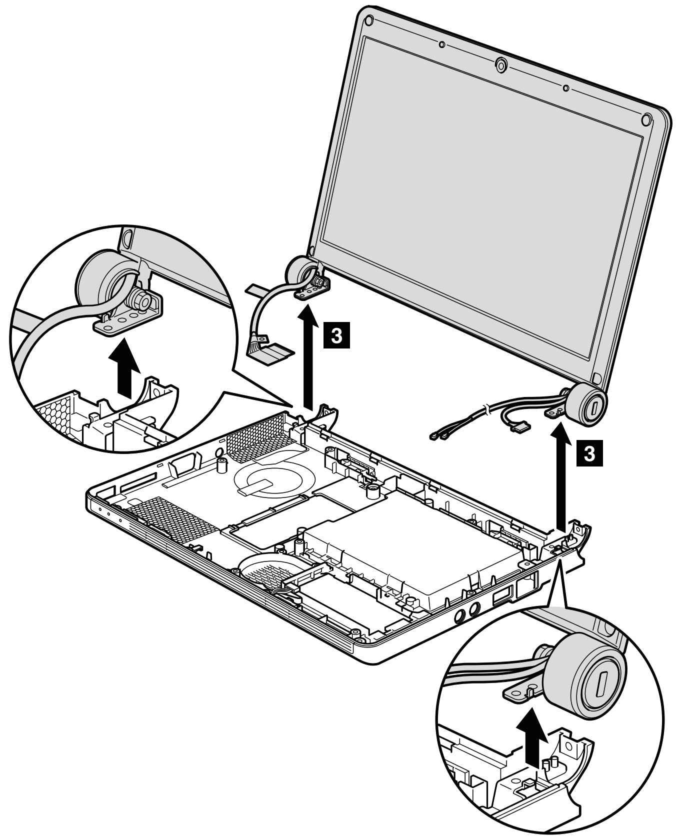
Table 28. Removal steps of LCD assembly (for IdeaPad S10)

In step **1**, release the LCD cable, the camera cable, and the wireless WAN antenna cables from the cable guides of the base cover.

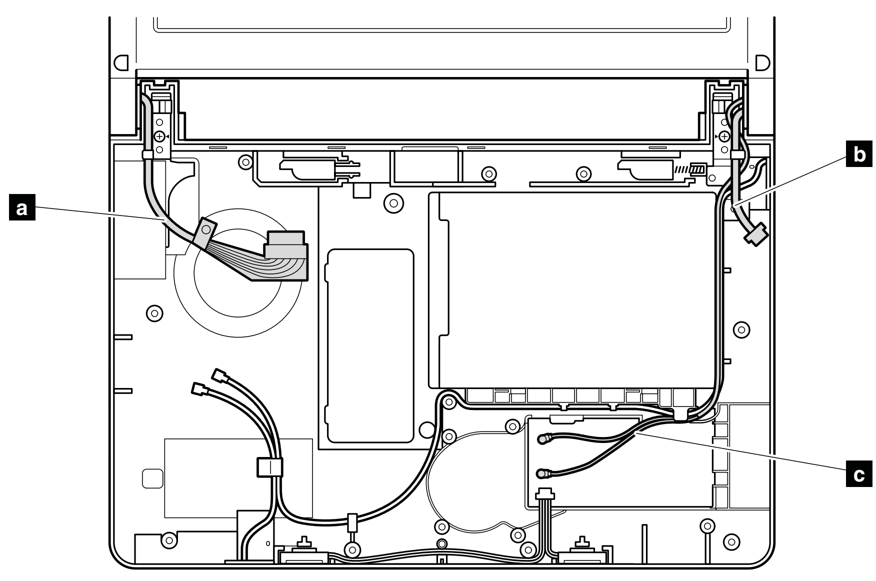


Step	Screw (quantity)	Color	Torque
2	M2 × 4 mm, wafer-head, nylon-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

Table 28. Removal steps of LCD assembly (for IdeaPad S10) (continued)



When installing: Route the LCD cable (**a**), the camera cable (**b**), and the wireless WAN antenna cables (**c**) along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.



Applying labels to the base cover:
The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following labels:

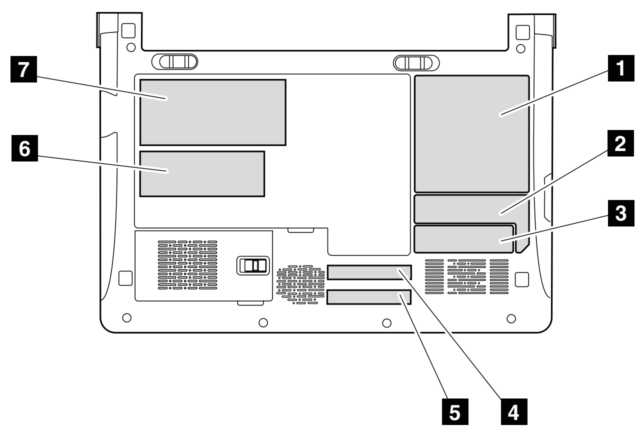
1 Product label
2 Homologation label

Following labels need to be peeled off from the old base cover, and need to be put on the new base cover.

3 Serial number label
4 MAC address label
5 Wireless WAN IMEI label
6 SIM ICC ID label
7 Windows license label (COA)

For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

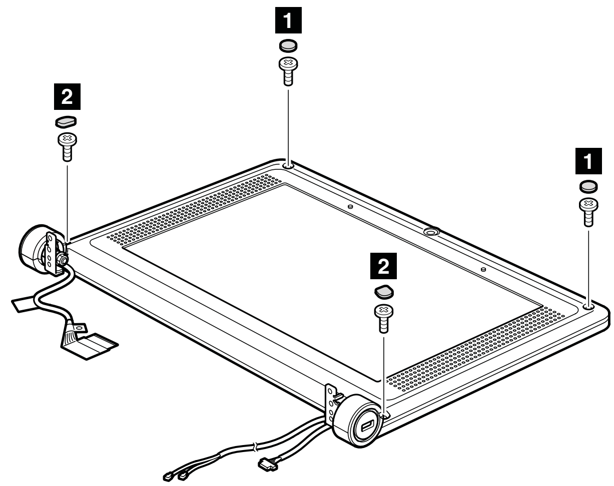
For the location of each label, refer the following figure:



2010 LCD front bezel

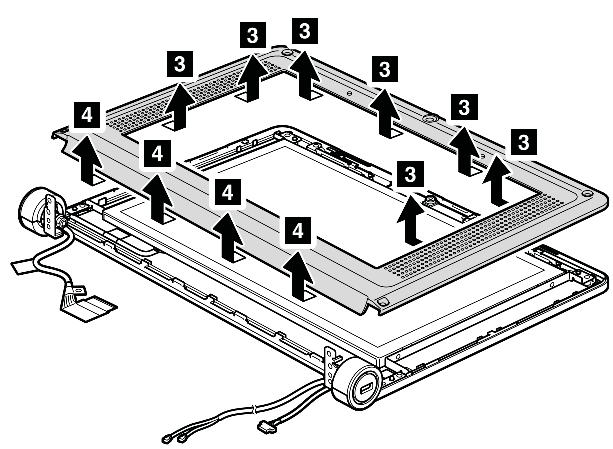
For access, remove this FRU:
- "1010 Battery pack" on page 57

Table 29. Removal steps of LCD front bezel



Step	Screw cap	Screw (quantity)	Color	Torque
1	○	M2 × 4 mm, wafer-head, wafer-coated (2)	Silver	0.181 Nm (1.85 kgfcm)
2	◡	M2 × 4 mm, wafer-head, wafer-coated (2)	Silver	0.181 Nm (1.85 kgfcm)

In step 3 and 4, detach the claws. Then remove the LCD front bezel.



When installing: Make sure that all the claws are attached firmly.

2020 Hinges

For access, remove these FRUs in order:

- "1010 Battery pack" on page 57
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77
- "1140 LCD assembly (for IdeaPad S9e and S10e)" on page 87
- "1150 LCD assembly (for IdeaPad S10)" on page 90
- "2010 LCD front bezel" on page 93

Table 30. Removal steps of hinges

Remove the hinge caps.

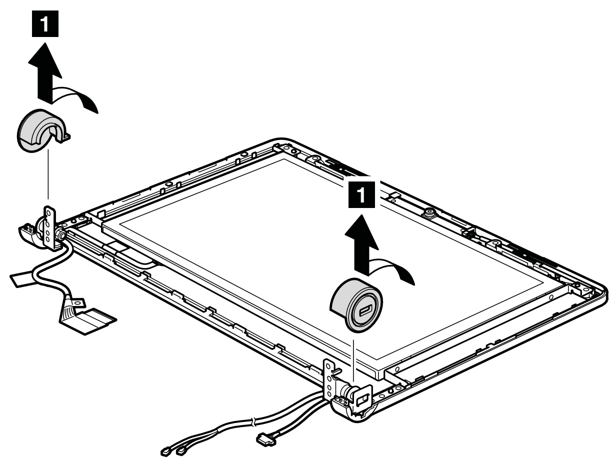
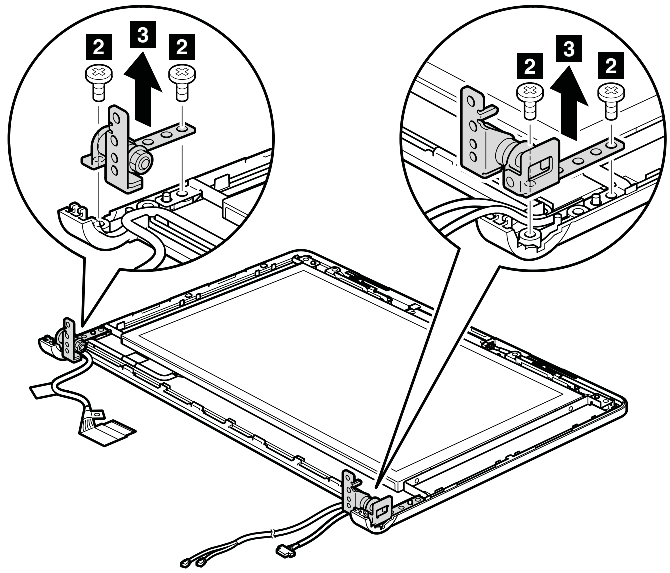


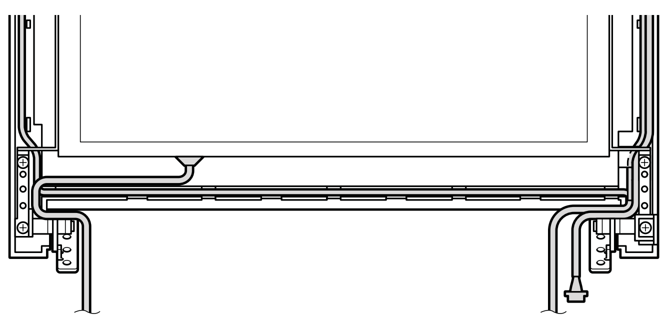
Table 30. Removal steps of hinges (continued)

Remove the hinges from the LCD rear cover.



Step	Screw (quantity)	Color	Torque
2	M2 × 4 mm, wafer-head, wafer-coated (4)	Silver	0.181 Nm (1.85 kgfcm)

When installing: Route the cables in this figure.



2030 LCD panel and LCD cable

For access, remove these FRUs in order:

- "1010 Battery pack" on page 57
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77
- "1140 LCD assembly (for IdeaPad S9e and S10e)" on page 87
- "1150 LCD assembly (for IdeaPad S10)" on page 90
- "2010 LCD front bezel" on page 93
- "2020 Hinges" on page 94

Table 31. Removal steps of LCD panel and LCD cable

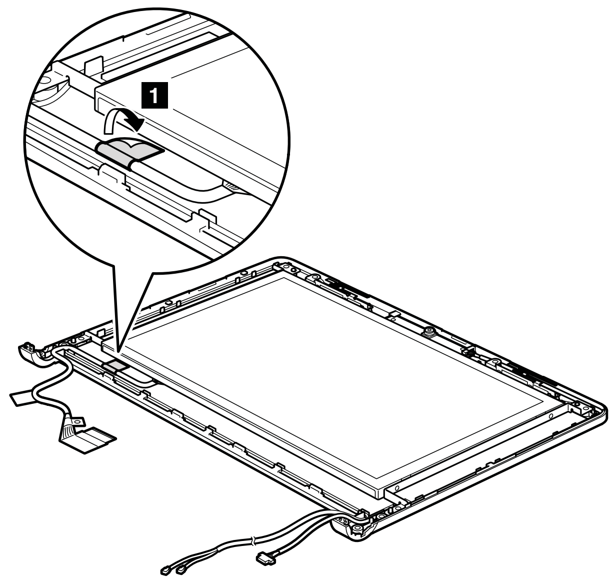
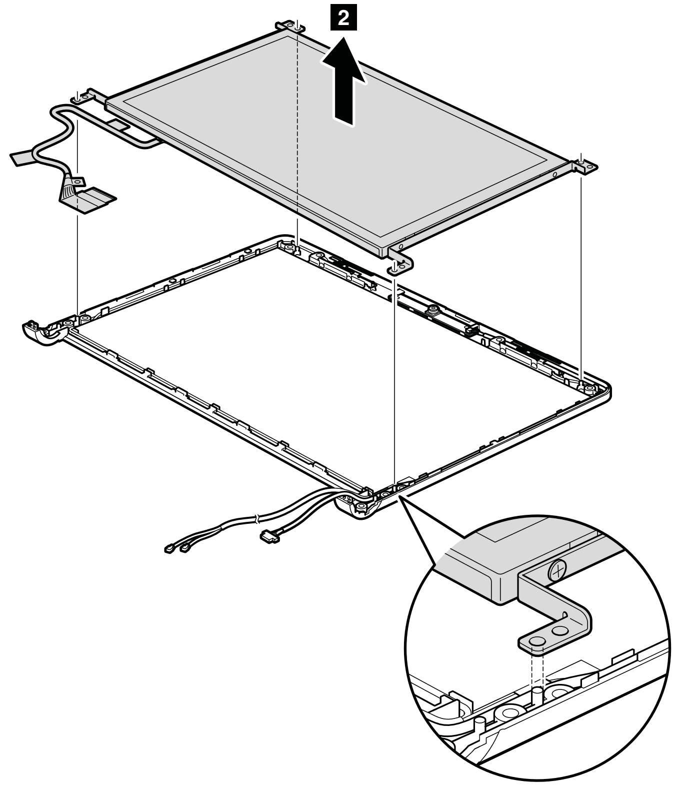
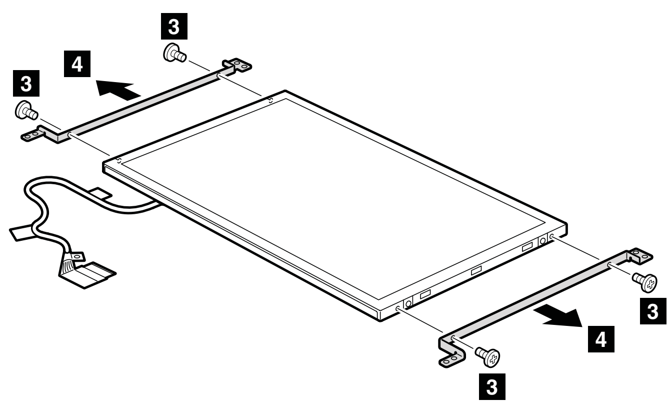


Table 31. Removal steps of LCD panel and LCD cable (continued)



Remove the LCD brackets from the LCD panel.

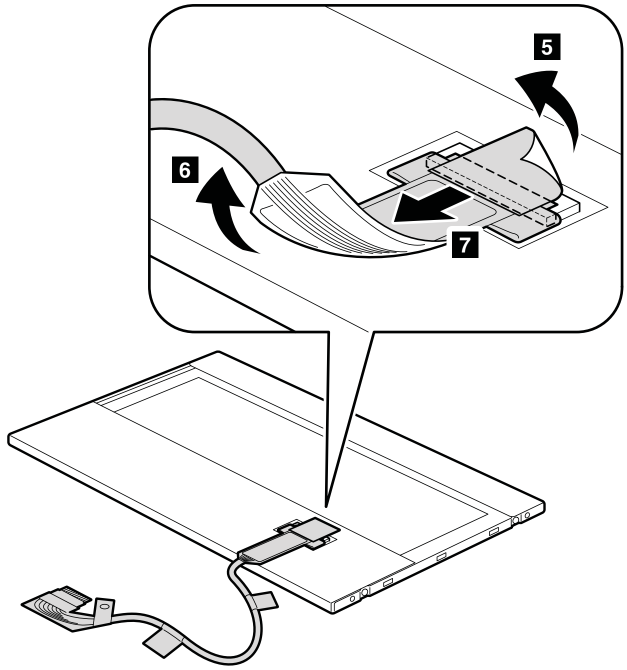


Step	Screw (quantity)	Color	Torque
3	M2 × 2.5 mm, wafer-head, nylon-coated (4)	Silver	0.181 Nm (1.85 kgfcm)

Table 31. Removal steps of LCD panel and LCD cable (continued)

IdeaPad S9e and S10e:

Turn the LCD panel over, and then remove the LCD cable.

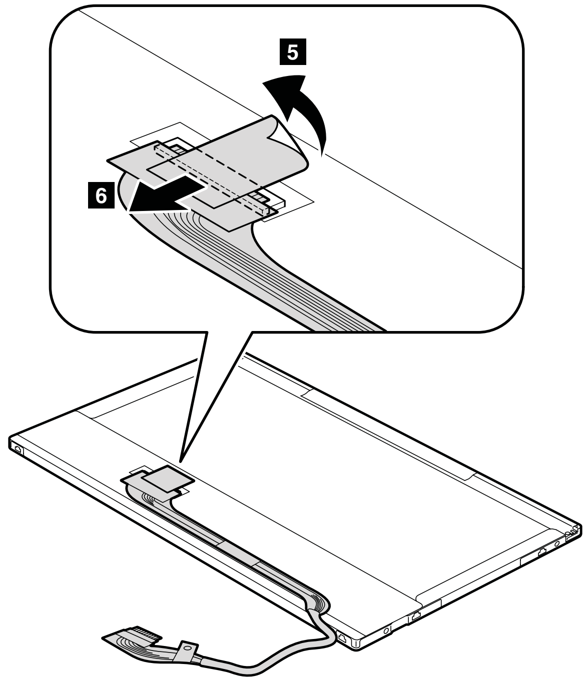


When installing: Make sure that the LCD cable connector is attached firmly.

Table 31. Removal steps of LCD panel and LCD cable (continued)

IdeaPad S10:

Turn the LCD panel over, and then remove the LCD cable.



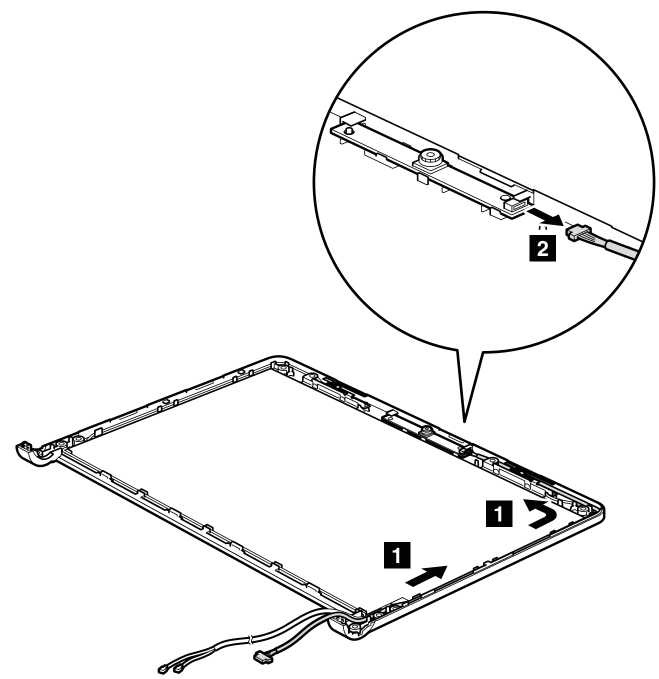
When installing: Make sure that the LCD cable connector is attached firmly.

2040 Integrated camera, camera cable, and LCD rear cover assembly (for IdeaPad S9e and S10e)

For access, remove these FRUs in order:
- "1010 Battery pack" on page 57
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 *Bluetooth* daughter card and *Bluetooth* cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77
- "1140 LCD assembly (for IdeaPad S9e and S10e)" on page 87
- "1150 LCD assembly (for IdeaPad S10)" on page 90
- "2010 LCD front bezel" on page 93
- "2020 Hinges" on page 94
- "2030 LCD panel and LCD cable" on page 96

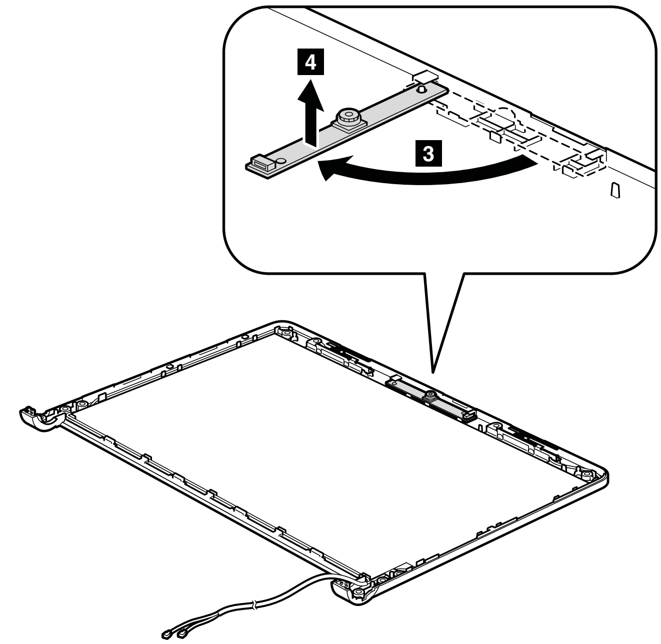
Table 32. Removal steps of Integrated camera, camera cable, and LCD rear cover assembly (for IdeaPad S9e and S10e)

In step **1**, release the camera cable from the cable guides of the rear cover.

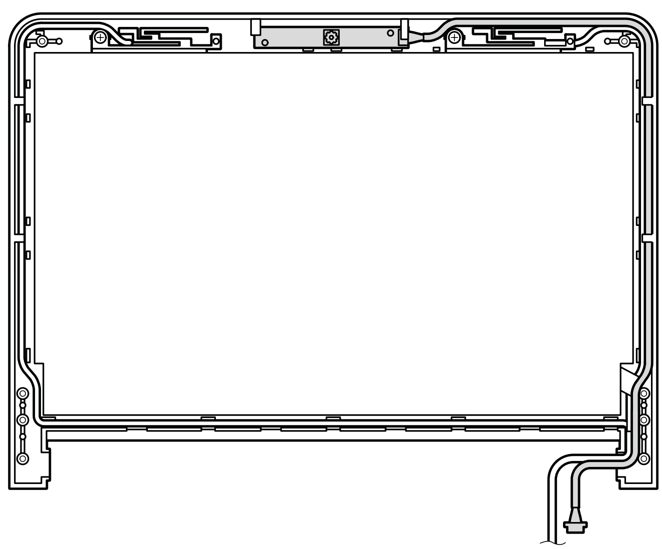


When installing: Make sure that the camera connector is attached firmly.

Table 32. Removal steps of Integrated camera, camera cable, and LCD rear cover assembly (for IdeaPad S9e and S10e) (continued)



When installing: Route the camera cable as shown in this figure.



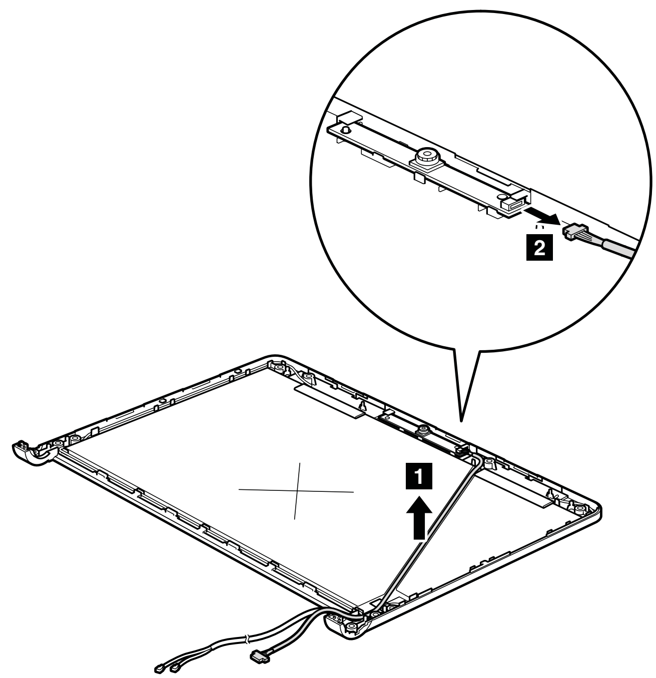
2050 Integrated camera, camera cable, and LCD rear cover assembly (for IdeaPad S10)

For access, remove these FRUs in order:

- "1010 Battery pack" on page 57
- "1030 Hard disk drive (HDD)" on page 59
- "1040 DIMM" on page 62
- "1050 PCI Express Mini Card for wireless WAN (for IdeaPad S10)" on page 63
- "1060 Palm rest assembly" on page 65
- "1070 PCI Express Mini Card for wireless LAN" on page 68
- "1080 ***Bluetooth*** daughter card and ***Bluetooth*** cable" on page 70
- "1090 Keyboard" on page 72
- "1100 Keyboard bezel" on page 75
- "1110 Fan, backup battery, and system board" on page 77
- "1140 LCD assembly (for IdeaPad S9e and S10e)" on page 87
- "1150 LCD assembly (for IdeaPad S10)" on page 90
- "2010 LCD front bezel" on page 93
- "2020 Hinges" on page 94
- "2030 LCD panel and LCD cable" on page 96

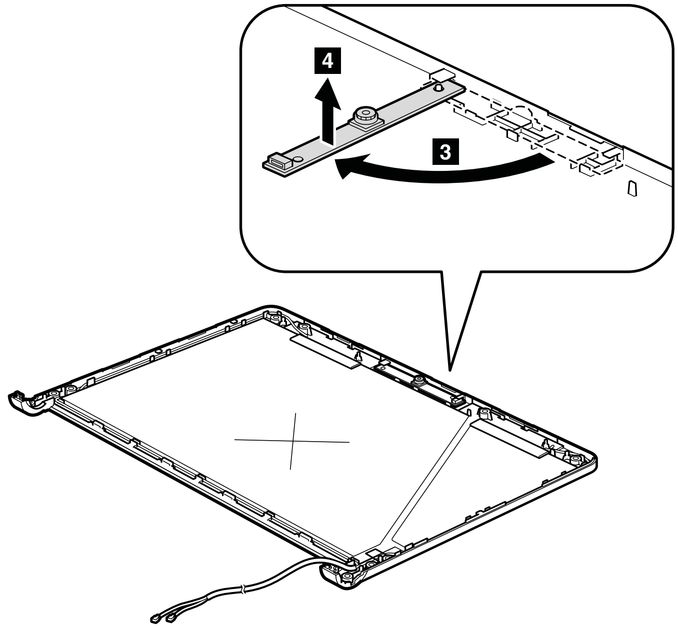
Table 33. Removal steps of Integrated camera, camera cable, and LCD rear cover assembly (for IdeaPad S10)

Note: The camera cable is secured with a double-faced adhesive tape.

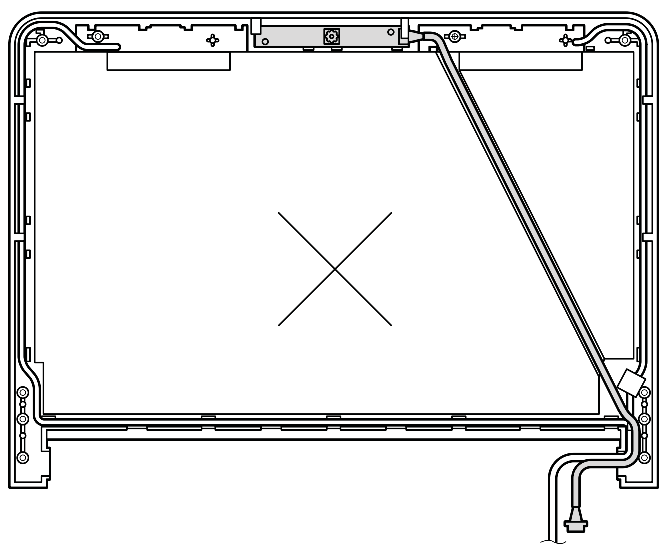


When installing: Make sure that the camera connector is attached firmly.

Table 33. Removal steps of Integrated camera, camera cable, and LCD rear cover assembly (for IdeaPad S10) (continued)



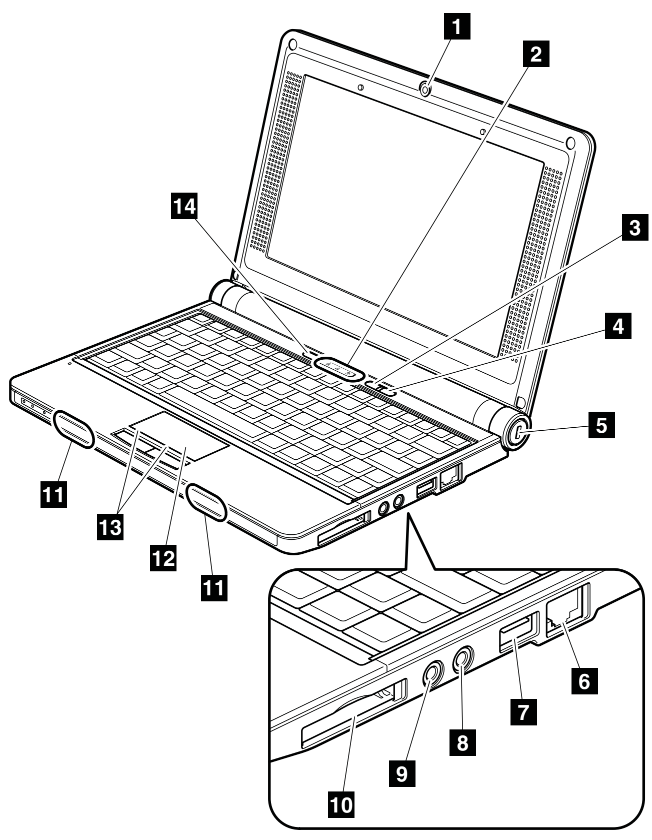
When installing: Route the camera cable as shown in this figure.



Locations

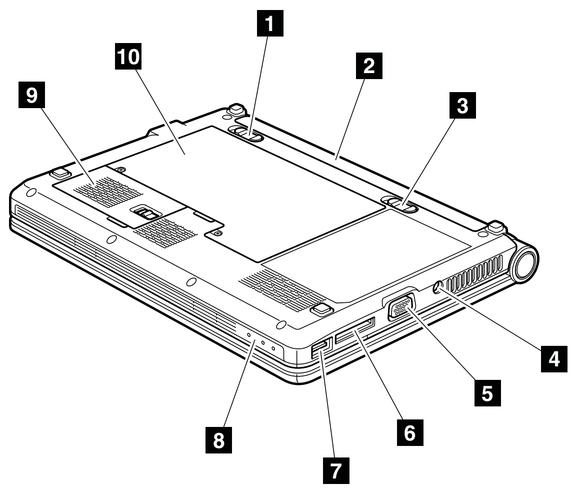
Front view

- **1** Integrated camera
- **2** Status indicators
  Note: For the description of each indicator, see “Status indicators” on page 47.
- **3** Novo button
- **4** Wireless device switch
- **5** Security keyhole
- **6** RJ-45 (Ethernet) connector
- **7** Universal serial bus (USB) connector
- **8** Microphone jack
- **9** Stereo headphone jack
- **10** ExpressCard slot (IdeaPad S9e and S10e)
- **11** Built-in speakers
- **12** Touch pad
- **13** Touch pad buttons
- **14** Power button



Bottom view

1 Battery pack latch - spring loaded
2 Battery pack
3 Battery pack latch - manual
4 AC power connector
5 External monitor connector
6 Multi-media reader slot
7 Universal serial bus (USB) connector
8 Status indicators
Note: For the description of each indicator, see “Status indicators” on page 47.
9 PCI Express Mini Card for wireless WAN and SIM card compartment (IdeaPad S10)
10 Hard disk drive (HDD) and DIMM compartment



Parts list

This section contains following lists of the service parts.

Notes:

- Each FRU is available for all types or models, unless specific types or models are specified.
- FRU with specific models listed and described as xxU (where U is an example of a country designator) should be used for all models ending in U.
- FRU with specific models listed and described as 3Dx (where 3D is an example of a unique configuration) should be used for all of these models, unless specific country or region designator is specified.
- A CRU (customer replaceable unit) is identified by a single asterisk (*) or two asterisks (**) in the CRU ID column. An N in the CRU ID column means that the part is not a CRU. A single asterisk (*) means that the part is a Self-service CRU; two asterisks (**) means that the part is an Optional-service CRU.

  IdeaPad computers contain the following types of CRUs:

  Self-service CRUs

  These CRUs unplug or are held by no more than two screws. Examples of these types of CRUs include an AC adapter, a power cord, a battery, and a hard disk drive. Other Self-service CRUs depending on product design may include a memory, a wireless card, a keyboard, and a palm rest with finger print reader and touchpad.

  Optional-service CRUs

  These CRUs are isolated parts within the computer that are concealed by an access panel that is typically secured by more than two screws. Once the access panel is removed, the specific CRU is visible.
- A RoHS compliant FRU is identified by an R. An N in the RoHS ID column means the part is not a RoHS compliant FRU.
- FRUs marked with **OP** are available as options.

Overall

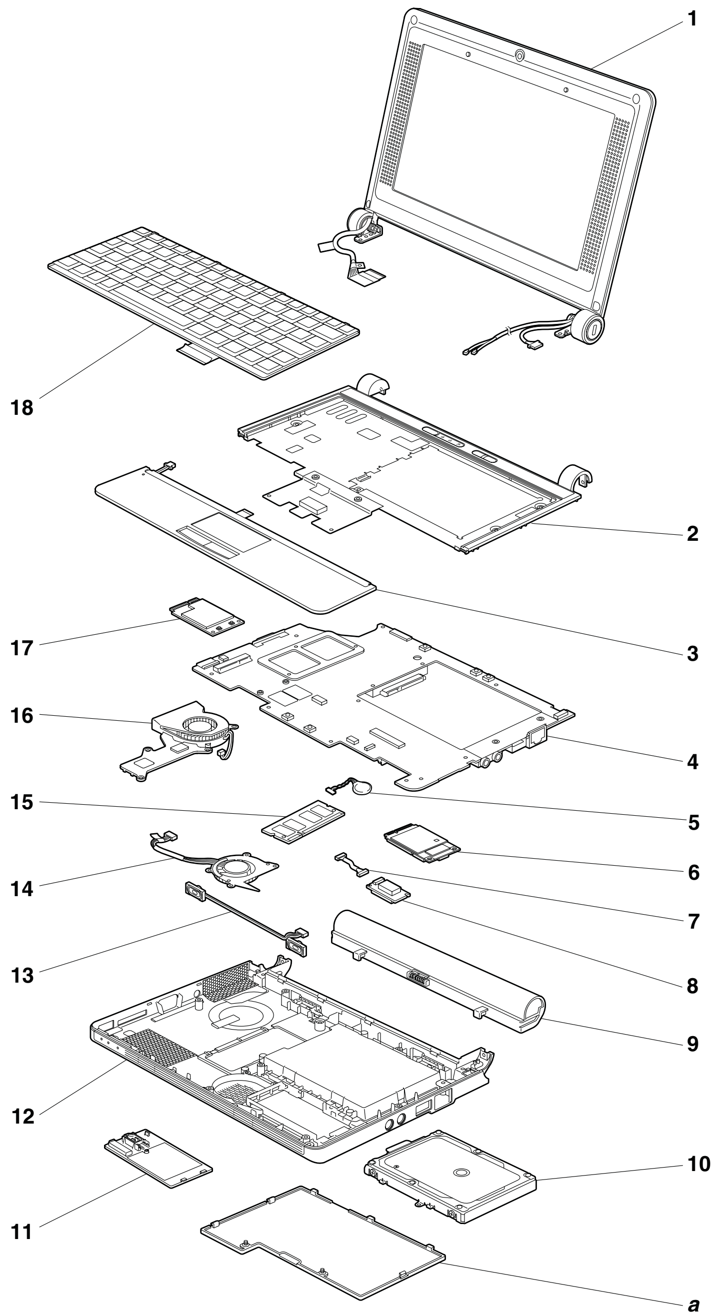


Table 34. Parts list—Overall

No.	FRU	FRU no.	RoHS ID	CRU ID
a	See "Miscellaneous parts" on page 123.			
1	LCD unit (see "LCD FRUs" on page 114.)			
2	Keyboard bezel assembly, black • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Gx, 2Hx, 2Nx, 2Rx, 2Tx, 2Ux, 2Wx, 2Xx, 32x, 35x, 38x, 3Bx, 3Ex, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Ex, 4Jx, 4Nx, 4Sx, 4Wx, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx • 4187-CTO, 27x, 29x, 2Gx, 2Hx, 2Kx, 2Nx, 2Px, 2Qx, 2Sx, 32x, 33x, 34x, 37x, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 42x, 45x, 48x, 4Bx, 4Ex, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 55x, 58x, 5Bx, 5Ex, 5Hx, 5Lx, 5Px, 5Sx, DRx, ERx • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx	45N3868	R	N
2	Keyboard bezel assembly, white • 4068-CTO, 2Cx, 2Dx, 2Ex, 2Jx, 2Kx, 2Lx, 2Px, 2Qx, 2Sx, 2Vx, 33x, 36x, 39x, 3Cx, 3Fx, 43x, 44x, 47x, 48x, 4Bx, 4Cx, 4Fx, 4Gx, 4Kx, 4Lx, 4Px, 4Qx, 4Tx, 4Ux, 4Xx, 4Yx, 52x, 53x, AGx, AHx • 4187-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Jx, 2Lx, 2Mx, 2Rx, 43x, 46x, 49x, 4Cx, 4Fx, 53x, 54x, 56x, 57x, 59x, 5Ax, 5Cx, 5Dx, 5Fx, 5Gx, 5Jx, 5Kx, 5Mx, 5Nx, 5Qx, 5Rx • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	45N5103	R	N
3	Palm rest assembly, black for IdeaPad S9e and S10e • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Gx, 2Hx, 2Nx, 2Rx, 2Tx, 2Ux, 2Wx, 2Xx, 32x, 35x, 38x, 3Bx, 3Ex, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Ex, 4Jx, 4Nx, 4Sx, 4Wx, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx • 4187-CTO, 27x, 29x, 2Gx, 2Hx, 2Kx, 2Nx, 2Px, 2Qx, 2Sx, 32x, 33x, 34x, 37x, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 42x, 45x, 48x, 4Bx, 4Ex, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 55x, 58x, 5Bx, 5Ex, 5Hx, 5Lx, 5Px, 5Sx, DRx, ERx	45N3816	R	**
3	Palm rest assembly, white for IdeaPad S9e and S10e • 4068-CTO, 2Cx, 2Dx, 2Ex, 2Jx, 2Kx, 2Lx, 2Px, 2Qx, 2Sx, 2Vx, 33x, 36x, 39x, 3Cx, 3Fx, 43x, 44x, 47x, 48x, 4Bx, 4Cx, 4Fx, 4Gx, 4Kx, 4Lx, 4Px, 4Qx, 4Tx, 4Ux, 4Xx, 4Yx, 52x, 53x, AGx, AHx • 4187-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Jx, 2Lx, 2Mx, 2Rx, 43x, 46x, 49x, 4Cx, 4Fx, 53x, 54x, 56x, 57x, 59x, 5Ax, 5Cx, 5Dx, 5Fx, 5Gx, 5Jx, 5Kx, 5Mx, 5Nx, 5Qx, 5Rx	45N5097	R	**
3	Palm rest assembly, black for IdeaPad S10 • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx	45N5918	R	**
3	Palm rest assembly, white for IdeaPad S10 • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	45N5919	R	**

Table 34. Parts list—Overall (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
4	System board with Intel ATOM Processor N270 (1.6 GHz) without SSD for IdeaPad S9e and S10e • 4068-CTO, 23x, 24x, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Fx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Wx, 2Xx, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Kx, 3Lx, 3Mx, 42x, 43x, 44x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A3x, A5x, A7x, A8x, A9x, AAx, ABx, AEx, AFx, AGx, AHx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Rx, 2Sx, 33x, 34x, 37x, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 42x, 43x, 48x, 49x, 4Bx, 4Cx, 4Kx, 4Lx, 4Mx, 4Px, 52x, 53x, 54x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx	45N4436	R	N
4	System board with Intel ATOM Processor N270 (1.6 GHz) with SSD for IdeaPad S9e and S10e • 4068-CTO, 22x, 28x, 2Gx, 2Hx, 2Jx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 32x, 33x, 3Ex, 3Fx, 3Hx, 3Jx, 3Nx, 46x, 47x, 48x, 4Nx, 4Px, 4Qx, A2x, A4x, A6x, ACx, ADx • 4187-CTO, 2Gx, 2Hx, 2Jx, 2Qx, 32x, 45x, 46x, 4Ex, 4Fx, 4Nx, 55x, 56x, 57x, 5Hx, 5Jx, 5Kx, 5Sx, DRx, ERx	45N4438	R	N
4	System board with Intel ATOM Processor N270 (1.6 GHz) without SSD for IdeaPad S10	42W8294	R	N
5	Backup battery	92P1233	R	N
6	Ericsson F3507g USA - Wireless WAN card for IdeaPad S10 • 4329-CTO, 2Ax, 2Bx, 2Qx, 2Rx • 4333-CTO, 22x, 25x, 28x, 29x, 2Tx	43Y6537	R	N
6	Ericsson F3507g Other - Wireless WAN card for IdeaPad S10 • 4329-CTO, 2Cx, 2Dx, 2Sx • 4333-CTO, 23x, 2Ax, 2Bx	43Y6513	R	N
7	*Bluetooth* cable • 4068-CTO, 24x, 27x, 29x, 2Cx, 2Dx, 2Ex, 2Fx, 2Gx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 2Wx, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Kx, 42x, 43x, 44x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, A6x, A7x, AAx, ABx, AFx, AGx, AHx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Dx, 2Gx, 2Kx, 2Lx, 2Mx, 2Nx, 2Rx, 33x, 37x, 3Ax, 3Dx, 3Hx, 3Jx, 42x, 43x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, 4Kx, 52x, 53x, 54x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx • 4329-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Qx, 2Rx, 2Sx • 4333-CTO, 28x, 29x, 2Ax, 2Bx, 2Tx	44C9902	R	N

Table 34. Parts list—Overall (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
8	*Bluetooth* daughter card (BDC-2.1) • 4068-CTO, 24x, 27x, 29x, 2Cx, 2Dx, 2Ex, 2Fx, 2Gx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 2Wx, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Kx, 42x, 43x, 44x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, A6x, A7x, AAx, ABx, AFx, AGx, AHx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Dx, 2Gx, 2Kx, 2Lx, 2Mx, 2Nx, 2Rx, 33x, 37x, 3Ax, 3Dx, 3Hx, 3Jx, 42x, 43x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, 4Kx, 52x, 53x, 54x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx • 4329-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Qx, 2Rx, 2Sx • 4333-CTO, 28x, 29x, 2Ax, 2Bx, 2Tx	43Y6491	R	N
9	Battery pack, 3 cell, black • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 2Bx, 2Gx, 2Hx, 2Nx, 2Ux, 2Xx, 32x, 35x, 38x, 3Bx, 3Ex, 3Hx, 3Jx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Nx, 4Sx, A3x, A4x, A6x, A8x, A9x, AAx, ABx, ACx, AEx • 4187-CTO, 27x, 29x, 2Gx, 2Hx, 2Kx, 2Px, 2Qx, 32x, 34x, 37x, 39x, 3Dx, 3Hx, 3Jx, 42x, 45x, 48x, 4Bx, 4Ex, 4Mx, 4Nx, 52x, 55x, 58x, 5Hx, 5Lx, 5Sx • 4329-CTO • 4333-CTO, 22x, 23x	42T4587	R	*
9	Battery pack, 3 cell, black • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 2Bx, 2Gx, 2Hx, 2Nx, 2Ux, 2Xx, 32x, 35x, 38x, 3Bx, 3Ex, 3Hx, 3Jx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Nx, 4Sx, A3x, A4x, A6x, A8x, A9x, AAx, ABx, ACx, AEx • 4187-CTO, 27x, 29x, 2Gx, 2Hx, 2Kx, 2Px, 2Qx, 32x, 34x, 37x, 39x, 3Dx, 3Hx, 3Jx, 42x, 45x, 48x, 4Bx, 4Ex, 4Mx, 4Nx, 52x, 55x, 58x, 5Hx, 5Lx, 5Sx • 4329-CTO • 4333-CTO, 22x, 23x	42T4591	R	*
9	Battery pack, 6 cell, black • 4068-CTO, 29x, 2Ax, 2Fx, 2Rx, 2Tx, 2Wx, 3Kx, 3Lx, 4Ex, 4Jx, 4Wx, 55x, 56x, 57x, A2x, A5x, A7x, ADx, AFx • 4187-CTO, 2Nx, 2Sx, 33x, 3Ax, 4Kx, 4Lx, 4Px, 5Bx, 5Ex, 5Px, DRx, ERx • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 25x, 28x, 2Ax, 2Tx	42T4589	R	*
9	Battery pack, 6 cell, black • 4068-CTO, 29x, 2Ax, 2Fx, 2Rx, 2Tx, 2Wx, 3Kx, 3Lx, 4Ex, 4Jx, 4Wx, 55x, 56x, 57x, A2x, A5x, A7x, ADx, AFx • 4187-CTO, 2Nx, 2Sx, 33x, 3Ax, 4Kx, 4Lx, 4Px, 5Bx, 5Ex, 5Px, DRx, ERx • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 25x, 28x, 2Ax, 2Tx	42T4593	R	*

Table 34. Parts list—Overall (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
9	Battery pack, 3 cell, white • 4068-CTO, 2Jx, 2Px, 2Qx, 33x, 36x, 39x, 3Cx, 3Fx, 43x, 44x, 47x, 48x, 4Bx, 4Cx, 4Px, 4Qx, 4Tx, 4Ux, 52x, 53x • 4187-CTO, 2Jx, 2Lx, 2Mx, 43x, 46x, 49x, 4Cx, 4Fx, 53x, 54x, 56x, 57x, 59x, 5Ax, 5Jx, 5Kx, 5Mx, 5Nx • 4329-CTO • 4333-CTO	42T4680	R	*
9	Battery pack, 3 cell, white • 4068-CTO, 2Jx, 2Px, 2Qx, 33x, 36x, 39x, 3Cx, 3Fx, 43x, 44x, 47x, 48x, 4Bx, 4Cx, 4Px, 4Qx, 4Tx, 4Ux, 52x, 53x • 4187-CTO, 2Jx, 2Lx, 2Mx, 43x, 46x, 49x, 4Cx, 4Fx, 53x, 54x, 56x, 57x, 59x, 5Ax, 5Jx, 5Kx, 5Mx, 5Nx • 4329-CTO • 4333-CTO	42T4684	R	*
9	Battery pack, 6 cell, white • 4068-CTO, 2Cx, 2Dx, 2Ex, 2Kx, 2Lx, 2Sx, 2Vx, 4Fx, 4Gx, 4Kx, 4Lx, 4Xx, 4Yx, AGx, AHx • 4187-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Rx, 5Cx, 5Dx, 5Fx, 5Gx, 5Qx, 5Rx • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	42T4682	R	*
9	Battery pack, 6 cell, white • 4068-CTO, 2Cx, 2Dx, 2Ex, 2Kx, 2Lx, 2Sx, 2Vx, 4Fx, 4Gx, 4Kx, 4Lx, 4Xx, 4Yx, AGx, AHx • 4187-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Rx, 5Cx, 5Dx, 5Fx, 5Gx, 5Qx, 5Rx • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	42T4686	R	*
10	SATA hard disk drive, 80 GB, 9.5 mm, 5,400 rpm • 4068-CTO, 23x, 27x, 29x, 2Bx, 2Gx, 2Hx, 2Jx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 42x, 43x, 44x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, A3x, A8x, AAx, AEx, AFx • 4187-CTO, 29x, 2Cx, 2Ex, 2Gx, 2Hx, 2Jx, 33x, 34x, 39x, 3Ax, 3Hx, 42x, 43x, 48x, 49x, 4Bx, 4Cx, 52x, 53x, 54x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx	41W0063	R	*
10	SATA hard disk drive, 80 GB, 9.5 mm, 5,400 rpm **OP** • 4068-CTO, 23x, 27x, 29x, 2Bx, 2Gx, 2Hx, 2Jx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 42x, 43x, 44x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, A3x, A8x, AAx, AEx, AFx • 4187-CTO, 29x, 2Cx, 2Ex, 2Gx, 2Hx, 2Jx, 33x, 34x, 39x, 3Ax, 3Hx, 42x, 43x, 48x, 49x, 4Bx, 4Cx, 52x, 53x, 54x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx	41W0065	R	*
10	SATA hard disk drive, 160 GB, 9.5 mm, 5,400 rpm **OP** • 4068-CTO, 24x, 2Ax, 2Cx, 2Dx, 2Ex, 2Fx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Wx, 2Xx, 3Kx, 3Lx, 3Mx, 3Nx, 4Jx, 4Kx, 4Lx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A5x, A7x, A9x, ABx, AGx, AHx • 4187-CTO, 27x, 2Ax, 2Bx, 2Dx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 37x, 3Dx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 5Ex, 5Fx, 5Gx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx	41W0059	R	*

Table 34. Parts list—Overall (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
10	SATA hard disk drive, 160 GB, 9.5 mm, 5,400 rpm • 4068-CTO, 24x, 2Ax, 2Cx, 2Dx, 2Ex, 2Fx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Wx, 2Xx, 3Kx, 3Lx, 3Mx, 3Nx, 4Jx, 4Kx, 4Lx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A5x, A7x, A9x, ABx, AGx, AHx • 4187-CTO, 27x, 2Ax, 2Bx, 2Dx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 37x, 3Dx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 5Ex, 5Fx, 5Gx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx	41W0061	R	*
10	SATA hard disk drive, 160 GB, 9.5 mm, 5,400 rpm **OP** • 4329-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Qx, 2Rx, 2Sx • 4333-CTO, 22x, 23x, 25x, 28x, 29x, 2Ax, 2Bx, 2Tx	41W0743	R	*
10	SATA hard disk drive, 160 GB, 9.5 mm, 5,400 rpm • 4329-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Qx, 2Rx, 2Sx • 4333-CTO, 22x, 23x, 25x, 28x, 29x, 2Ax, 2Bx, 2Tx	41W0745	R	*
11	Wireless WAN/SIM door, black for IdeaPad S10 • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx	45M2381	R	N
11	Wireless WAN/SIM door, white for IdeaPad S10 • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	45M2380	R	N
12	Base cover assembly, dark silver for 4068 • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Wx, 2Xx, 3Hx, 3Jx, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx	45N3869	R	N
12	Base cover assembly, blue for 4068 • 4068-CTO, 2Lx, 53x, AHx	45N5104	R	N
12	Base cover assembly, red for 4068 • 4068-CTO, 2Jx, 2Qx, 2Sx, 44x, 48x, 4Cx, 4Gx, 4Lx, 4Qx, 4Ux, 4Yx	45N5105	R	N
12	Base cover assembly, pink for 4068 • 4068-CTO	45N5106	R	N
12	Base cover assembly, white for 4068 • 4068-CTO, 2Cx, 2Ex, 2Kx, 2Px, 2Vx, 33x, 36x, 39x, 3Cx, 3Fx, 43x, 47x, 4Bx, 4Fx, 4Kx, 4Px, 4Tx, 4Xx, 52x, AGx	45N5107	R	N
12	Base cover assembly, painted black for 4068 • 4068-CTO, 2Dx	45N5108	R	N
12	Base cover assembly, material black for 4068 • 4068-CTO, 2Fx, 2Gx, 2Hx, 2Nx, 2Rx, 2Tx, 2Ux, 32x, 35x, 38x, 3Bx, 3Ex, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Ex, 4Jx, 4Nx, 4Sx, 4Wx, 55x, 56x	45N5117	R	N
12	Base cover assembly, dark silver for 4187 • 4187-CTO, 27x, 29x, 2Nx, 2Px, 2Qx, 2Sx, 32x, 33x, 34x, 37x, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Px, DRx, ERx	45N3892	R	N
12	Base cover assembly, blue for 4187 • 4187-CTO	45N5109	R	N
12	Base cover assembly, red for 4187 • 4187-CTO, 2Cx, 2Jx, 2Mx, 54x, 57x, 5Ax, 5Dx, 5Gx, 5Kx, 5Nx, 5Rx	45N5110	R	N

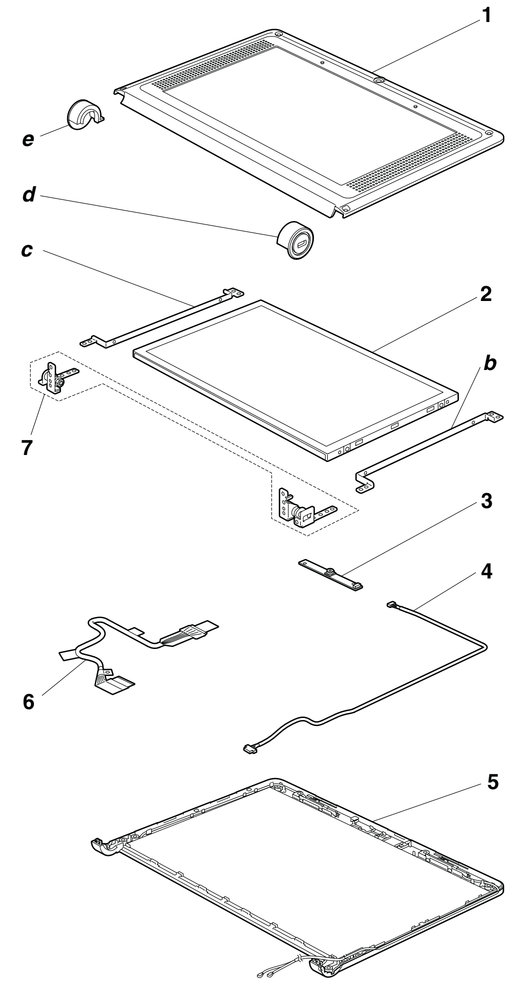
Table 34. Parts list—Overall (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
12	Base cover assembly, pink for 4187 • 4187-CTO	45N5111	R	N
12	Base cover assembly, white for 4187 • 4187-CTO, 2Ax, 2Dx, 2Lx, 43x, 46x, 49x, 4Cx, 4Fx, 53x, 56x, 59x, 5Cx, 5Fx, 5Jx, 5Mx, 5Qx	45N5112	R	N
12	Base cover assembly, painted black for 4187 • 4187-CTO, 2Bx, 2Ex, 2Rx	45N5113	R	N
12	Base cover assembly, material black for 4187 • 4187-CTO, 2Gx, 2Hx, 2Kx, 42x, 45x, 48x, 4Bx, 4Ex, 4Kx, 4Lx, 4Mx, 4Nx, 52x, 55x, 58x, 5Bx, 5Ex, 5Hx, 5Lx, 5Px, 5Sx	45N5118	R	N
12	Base cover assembly, white for 4329 • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx	45N5922	R	N
12	Base cover assembly, material black for 4329 • 4329-CTO, 2Bx, 2Cx, 2Rx	45N5923	R	N
12	Base cover assembly, white for 4333 • 4333-CTO, 29x, 2Bx	45N5924	R	N
12	Base cover assembly, material black for 4333 • 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx	45N5925	R	N
13	Speaker kit	45N3865	R	N
14	Second fan assembly for IdeaPad S10	45N5920	R	N
15	512-MB DDR2-533 SDRAM SO-DIMM (PC2-5300) card • 4068-CTO, 23x, 27x, 28x, 29x, 2Cx, 2Dx, 2Ex, 2Fx, 2Hx, 2Jx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Vx, 2Wx, 2Xx, 38x, 39x, 3Bx, 3Cx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 43x, 44x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A4x, A8x, AAx, AFx, AGx, AHx • 4187-CTO, 29x, 2Ax, 2Bx, 2Cx, 2Dx, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 33x, 3Ax, 3Dx, 3Hx, 42x, 43x, 4Bx, 4Cx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 53x, 54x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx, DRx, ERx	40Y8402	R	*
15	1-GB DDR2-533 SDRAM SO-DIMM (PC2-5300) card • 4068-CTO, 24x, 2Ax, 4Jx, 4Kx, 4Lx, A2x, A5x, A7x, ABx • 4187-CTO, 27x, 3Jx, 5Ex, 5Fx, 5Gx • 4329-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Qx, 2Rx, 2Sx • 4333-CTO, 22x, 23x, 25x, 28x, 29x, 2Ax, 2Bx, 2Tx	40Y8403	R	*
16	Fan assembly	45N3864	R	N
17	Broadcom 11b/g WiFi Wireless Adapter	43Y6487	R	**
17	Broadcom 11b/g WiFi Wireless Adapter	43Y6489	R	**
18	Keyboard (see “Keyboard” on page 120.)			
—	AC adapter (see “AC adapters” on page 124.)			

LCD FRUs

In IdeaPad S9e, S10e, and S10, there are following types of LCDs.

- “8.9-in. WSVGA TFT” on page 115
- “10.1-in. WSVGA TFT” on page 117



8.9-in. WSVGA TFT

Table 35. Parts list—8.9-in. WSVGA TFT

No.	FRU	FRU no.	RoHS ID	CRU ID
b - e	See "Miscellaneous parts" on page 123.			
1	LCD front bezel assembly, black for 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Gx, 32x, 35x, 38x, 3Bx, 3Ex, 3Hx • 4187-CTO, 27x, 29x, 2Gx, 32x, 33x, 34x, 37x, 42x, 45x, 48x, 4Bx, 4Ex, DRx	45N3859	R	N
1	LCD front bezel assembly, white for 8.9-in. WSVGA • 4068-CTO, 2Ex, 33x, 36x, 39x, 3Cx, 3Fx • 4187-CTO, 2Ax, 2Bx, 2Cx, 43x, 46x, 49x, 4Cx, 4Fx	45N5090	R	N
2	LCD panel, 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Gx, 32x, 33x, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Hx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Gx, 32x, 33x, 34x, 37x, 42x, 43x, 45x, 46x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, DRx	42T0599	R	N
2	LCD panel, 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Gx, 32x, 33x, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Hx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Gx, 32x, 33x, 34x, 37x, 42x, 43x, 45x, 46x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, DRx	42T0603	R	N
2	LCD panel, 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Gx, 32x, 33x, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Hx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Gx, 32x, 33x, 34x, 37x, 42x, 43x, 45x, 46x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, DRx	42T0601	R	N
3	Integrated camera for 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Gx, 32x, 33x, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Hx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Gx, 32x, 33x, 34x, 37x, 42x, 43x, 45x, 46x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, DRx	42T4199	R	N
3	Integrated camera for 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Gx, 32x, 33x, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Hx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Gx, 32x, 33x, 34x, 37x, 42x, 43x, 45x, 46x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, DRx	42T4201	R	N
4	Camera cable	44C9901	R	N
5	LCD rear cover assembly, dark silver with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 3Hx • 4187-CTO, 27x, 29x, 32x, 33x, 34x, 37x, DRx	45N3861	R	N

Table 35. Parts list—8.9-in. WSVGA TFT (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
5	LCD rear cover assembly, blue with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO • 4187-CTO	45N5092	R	N
5	LCD rear cover assembly, red with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO • 4187-CTO, 2Cx	45N5093	R	N
5	LCD rear cover assembly, pink with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO • 4187-CTO	45N5094	R	N
5	LCD rear cover assembly, white with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Ex, 33x, 36x, 39x, 3Cx, 3Fx • 4187-CTO, 2Ax, 43x, 46x, 49x, 4Cx, 4Fx	45N5095	R	N
5	LCD rear cover assembly, black with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Fx, 2Gx, 32x, 35x, 38x, 3Bx, 3Ex • 4187-CTO, 2Bx, 2Gx, 42x, 45x, 48x, 4Bx, 4Ex	45N5096	R	N
6	LCD cable assembly for 8.9-in. WSVGA • 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Gx, 32x, 33x, 35x, 36x, 38x, 39x, 3Bx, 3Cx, 3Ex, 3Fx, 3Hx • 4187-CTO, 27x, 29x, 2Ax, 2Bx, 2Cx, 2Gx, 32x, 33x, 34x, 37x, 42x, 43x, 45x, 46x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Fx, DRx	43Y9849	R	N
7	Hinge L/R	45N3862	R	N

10.1-in. WSVGA TFT

Table 36. Parts list—10.1-in. WSVGA TFT

No.	FRU	FRU no.	RoHS ID	CRU ID
b - e	See “Miscellaneous parts” on page 123.			
1	LCD front bezel assembly, black for 10.1-in. WSVGA, IdeaPad S10e • 4068-CTO, 2Hx, 2Nx, 2Rx, 2Tx, 2Ux, 2Wx, 2Xx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Ex, 4Jx, 4Nx, 4Sx, 4Wx, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx • 4187-CTO, 2Hx, 2Kx, 2Nx, 2Px, 2Qx, 2Sx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 55x, 58x, 5Bx, 5Ex, 5Hx, 5Lx, 5Px, 5Sx, ERx	45N4959	R	N
1	LCD front bezel assembly, white for 10.1-in. WSVGA, IdeaPad S10e • 4068-CTO, 2Cx, 2Dx, 2Jx, 2Kx, 2Lx, 2Px, 2Qx, 2Sx, 2Vx, 43x, 44x, 47x, 48x, 4Bx, 4Cx, 4Fx, 4Gx, 4Kx, 4Lx, 4Px, 4Qx, 4Tx, 4Ux, 4Xx, 4Yx, 52x, 53x, AGx, AHx • 4187-CTO, 2Dx, 2Ex, 2Jx, 2Lx, 2Mx, 2Rx, 53x, 54x, 56x, 57x, 59x, 5Ax, 5Cx, 5Dx, 5Fx, 5Gx, 5Jx, 5Kx, 5Mx, 5Nx, 5Qx, 5Rx	45N5091	R	N
1	LCD front bezel assembly, black for 10.1-in. WSVGA, IdeaPad S10 • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx	45N5911	R	N
1	LCD front bezel assembly, white for 10.1-in. WSVGA, IdeaPad S10 • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	45N5912	R	N
2	LCD panel, 10.1-in. WSVGA for IdeaPad S10e • 4068-CTO, 2Cx, 2Dx, 2Hx, 2Jx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 2Wx, 2Xx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 43x, 44x, 46x, 47x, 48x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Nx, 4Px, 4Qx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AHx • 4187-CTO, 2Dx, 2Ex, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx, 5Sx, ERx	42T0617	R	N
2	LCD panel, 10.1-in. WSVGA for IdeaPad S10e • 4068-CTO, 2Cx, 2Dx, 2Hx, 2Jx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 2Wx, 2Xx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 43x, 44x, 46x, 47x, 48x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Nx, 4Px, 4Qx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AHx • 4187-CTO, 2Dx, 2Ex, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx, 5Sx, ERx	42T0619	R	N

Table 36. Parts list—10.1-in. WSVGA TFT (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
2	LCD panel, 10.1-in. WSVGA for IdeaPad S10e • 4068-CTO, 2Cx, 2Dx, 2Hx, 2Jx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 2Wx, 2Xx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 43x, 44x, 46x, 47x, 48x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Nx, 4Px, 4Qx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AHx • 4187-CTO, 2Dx, 2Ex, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx, 5Sx, ERx	42T0621	R	N
2	LCD panel, 10.1-in. WSVGA for IdeaPad S10	42T0773	R	N
2	LCD panel, 10.1-in. WSVGA for IdeaPad S10	42T0771	R	N
2	LCD panel, 10.1-in. WSVGA for IdeaPad S10	42T0793	R	N
3	Integrated camera for 10.1-in. WSVGA • 4068-CTO, 2Cx, 2Dx, 2Hx, 2Jx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 2Ux, 2Vx, 2Wx, 2Xx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 43x, 44x, 46x, 47x, 48x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Nx, 4Px, 4Qx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AHx • 4187-CTO, 2Dx, 2Ex, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Kx, 4Lx, 4Mx, 4Nx, 4Px, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx, 5Sx, ERx • 4329-all • 4333-all	42T4203	R	N
4	Camera cable	44C9901	R	N
5	LCD rear cover assembly, dark silver with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Wx, 2Xx, 3Jx, 57x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx • 4187-CTO, 2Nx, 2Px, 2Qx, 2Sx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 4Px, ERx	45N3861	R	N
5	LCD rear cover assembly, blue with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Lx, 53x, AHx • 4187-CTO	45N5092	R	N
5	LCD rear cover assembly, red with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Jx, 2Qx, 2Sx, 44x, 48x, 4Cx, 4Gx, 4Lx, 4Qx, 4Ux, 4Yx • 4187-CTO, 2Jx, 2Mx, 54x, 57x, 5Ax, 5Dx, 5Gx, 5Kx, 5Nx, 5Rx	45N5093	R	N
5	LCD rear cover assembly, pink with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO • 4187-CTO	45N5094	R	N

Table 36. Parts list—10.1-in. WSVGA TFT (continued)

No.	FRU	FRU no.	RoHS ID	CRU ID
5	LCD rear cover assembly, white with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Cx, 2Kx, 2Px, 2Vx, 43x, 47x, 4Bx, 4Fx, 4Kx, 4Px, 4Tx, 4Xx, 52x, AGx • 4187-CTO, 2Dx, 2Lx, 53x, 56x, 59x, 5Cx, 5Fx, 5Jx, 5Mx, 5Qx	45N5095	R	N
5	LCD rear cover assembly, black with wireless LAN antenna for IdeaPad S9e and S10e • 4068-CTO, 2Dx, 2Hx, 2Nx, 2Rx, 2Tx, 2Ux, 3Kx, 3Lx, 3Mx, 3Nx, 42x, 46x, 4Ax, 4Ex, 4Jx, 4Nx, 4Sx, 4Wx, 55x, 56x • 4187-CTO, 2Ex, 2Hx, 2Kx, 2Rx, 4Kx, 4Lx, 4Mx, 4Nx, 52x, 55x, 58x, 5Bx, 5Ex, 5Hx, 5Lx, 5Px, 5Sx	45N5096	R	N
5	LCD rear cover assembly, white with wireless WAN antenna for IdeaPad S10 • 4329-CTO, 2Bx, 2Cx, 2Rx • 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx	45N5913	R	N
5	LCD rear cover assembly, black with wireless WAN antenna for IdeaPad S10 • 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx • 4333-CTO, 29x, 2Bx	45N5914	R	N
6	LCD cable assembly for 10.1-in. WSVGA, IdeaPad S10e • 4068-CTO, 2Cx, 2Dx, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 3Jx, 42x, 43x, 44x, 46x, 47x, 48x, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, 4Nx, 4Px, 4Qx, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 54x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AHx, AJx • 4187-CTO, 2Dx, 2Ex, 2Hx, 2Jx, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx, ERx	44C9913	R	N
6	LCD cable assembly for 10.1-in. WSVGA, IdeaPad S10	44C9949	R	N
7	Hinge L/R	45N3862	R	N

Keyboard

Keyboard (white)

- 4068-CTO, 2Cx, 2Dx, 2Ex, 2Jx, 2Kx, 2Lx, 2Mx, 33x, 36x, 39x, 3Cx, 3Fx, 43x, 44x, 47x, 48x, 4Bx, 4Cx, 4Fx, 4Gx, 4Kx, 4Lx, 4Px, 4Qx, 4Tx, 4Ux, 4Xx, 4Yx, 52x, 53x, 54x, AGx, AHx, AJx
- 4187-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Jx, 43x, 46x, 49x, 4Cx, 4Fx, 53x, 54x, 56x, 57x, 59x, 5Ax, 5Cx, 5Dx, 5Fx, 5Gx, 5Jx, 5Kx, 5Mx, 5Nx, 5Qx, 5Rx
- 4329-CTO, 2Ax, 2Dx, 2Qx, 2Sx
- 4333-CTO, 29x, 2Bx

Table 37. Parts list—Keyboard (white)

Language	**P/N (white)**	**RoHS ID**	**CRU ID**
Arabic	42T4244	R	**
Belgian	42T4245		
Brazilian Portuguese	42T4272		
Bulgarian	42T4275		
Canadian French (058)	42T4243		
Canadian French (Acnor)	42T4242		
Czech	42T4246		
Danish	42T4247		
Dutch	42T4255		
Finnish, Swedish	42T4262		
French	42T4249		
German	42T4250		
Greek (U.S. English and Greek layout)	42T4251		
Hebrew	42T4253		
Hungarian	42T4252		
Icelandic	42T4273		
Italian	42T4254		
Japanese	45N4267		
Kazakhstan	42T4274		
Latin American Spanish	42T4270		
Norwegian	42T4256		
Polish	42T4257		
Portuguese	42T4258		
Russian	42T4259		
Slovak	42T4260		
Slovenian	42T4261		
Spanish	42T4248		
Swiss	42T4263		
Traditional Chinese	42T4268		
Turkish	42T4264		
U.K. English	42T4265		
U.S. English	42T4241		
U.S. English (International, with a Euro symbol)	42T4266		

Keyboard (black)

- 4068-CTO, 22x, 23x, 24x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Gx, 2Hx, 32x, 35x, 38x, 3Bx, 3Ex, 3Hx, 3Jx, 42x, 46x, 4Ax, 4Ex, 4Jx, 4Nx, 4Sx, 4Wx, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx
- 4187-CTO, 27x, 29x, 2Gx, 2Hx, 32x, 33x, 34x, 37x, 39x, 3Ax, 3Dx, 3Hx, 3Jx, 42x, 45x, 48x, 4Bx, 4Ex, 52x, 55x, 58x, 5Bx, 5Ex, 5Hx, 5Lx, 5Px, DRx, ERx
- 4329-CTO, 2Bx, 2Cx, 2Rx
- 4333-CTO, 22x, 23x, 25x, 28x, 2Ax, 2Tx

Table 38. Parts list—Keyboard (black)

Language	P/N (black)	RoHS ID	CRU ID
Arabic	42T4166	R	**
Belgian	42T4167		
Brazilian Portuguese	42T4194		
Bulgarian	42T4197		
Canadian French (058)	42T4165		
Canadian French (Acnor)	42T4164		
Czech	42T4168		
Danish	42T4169		
Dutch	42T4177		
Finnish, Swedish	42T4184		
French	42T4171		
German	42T4172		
Greek (U.S. English and Greek layout)	42T4173		
Hebrew	42T4175		
Hungarian	42T4174		
Icelandic	42T4195		
Italian	42T4176		
Japanese	42T4189		
Kazakhstan	42T4196		
Latin American Spanish	42T4192		
Norwegian	42T4178		
Polish	42T4179		
Portuguese	42T4180		
Russian	42T4181		
Slovak	42T4182		
Slovenian	42T4183		
Spanish	42T4170		
Swiss	42T4185		
Traditional Chinese	42T4190		
Turkish	42T4186		
U.K. English	42T4187		
U.S. English	42T4163		
U.S. English (International, with a Euro symbol)	42T4188		

Miscellaneous parts

Table 39. Parts list—Miscellaneous parts

FRU	P/N	RoHS ID	CRU ID
Screw kit for IdeaPad S9e and S10e: • M2 × 2.5 mm (silver), wafer-head (10) • M2 × 4.0 mm (silver), wafer-head (25) • M2 × 6.0 mm (black), wafer-head (15) • M3 × 3.5 mm (silver), wafer-head (5)	45N3867	R	N
Screw kit for IdeaPad S10: • M2 × 2.0 mm (silver), wafer-head (10) • M2 × 2.5 mm (silver), wafer-head (10) • M2 × 4.0 mm (silver), wafer-head (25) • M2 × 6.0 mm (black), wafer-head (15) • M3 × 3.5 mm (silver), wafer-head (5)	45N5921	R	N
Misc parts kit (common) for IdeaPad S9e and S10e: • *(b)* LCD bracket, Right • *(c)* LCD bracket, Left • *(d)* Hinge cap, Right • *(e)* Hinge cap, Left **Note:** Italicized letters in parentheses are references to the exploded view in "LCD FRUs" on page 114.	45N3863	R	N
Misc parts kit (common) for IdeaPad S10: • *(b)* LCD bracket, Right • *(c)* LCD bracket, Left • *(d)* Hinge cap, Right • *(e)* Hinge cap, Left **Note:** Italicized letters in parentheses are references to the exploded view in "LCD FRUs" on page 114.	45N5915		
Rubber cap kit: • Rubber cap, Top, black • Rubber cap, Bottom, black • Rubber cap, Top, white • Rubber cap, Bottom, white • Rubber cap, Rear, dark silver • Rubber cap, Rear, blue • Rubber cap, Rear, red • Rubber cap, Rear, pink • Rubber cap, Rear, white • Rubber cap, Rear, black	45N5143	R	N
Misc parts kit (dark sliver) for IdeaPad S9e and S10e: • *(a)* HDD door, dark silver • ExpressCard dummy, dark silver **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5098	R	N
Misc parts kit (blue) for IdeaPad S9e and S10e: • *(a)* HDD door, blue • ExpressCard dummy, blue **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5099	R	N

Table 39. Parts list—Miscellaneous parts (continued)

FRU	P/N	RoHS ID	CRU ID
Misc parts kit (red) for IdeaPad S9e and S10e: • *(a)* HDD door, red • ExpressCard dummy, red **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5100	R	N
Misc parts kit (pink) for IdeaPad S9e and S10e: • *(a)* HDD door, pink • ExpressCard dummy, pink **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5101	R	N
Misc parts kit (white) for IdeaPad S9e and S10e: • *(a)* HDD door, white • ExpressCard dummy, white **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5102	R	N
Misc parts kit (black) for IdeaPad S9e and S10e: • *(a)* HDD door, painted black • ExpressCard dummy, painted black **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5115	R	N
Misc parts kit (all black) for IdeaPad S9e and S10e: • *(a)* HDD door, material black • ExpressCard dummy, material black **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5116	R	N
Misc parts kit (white) for IdeaPad S10: • *(a)* HDD door, white **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5916	R	N
Misc parts kit (all black) for IdeaPad S10: • *(a)* HDD door, material black **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 107.	45N5917	R	N

AC adapters

Table 40. Parts list—AC adapters

FRU	P/N	RoHS ID	CRU ID
2-pin (40 W, 20 V) adapter • models -CTO, xxE, xxF, xxJ, xxL, xxS, xxU, xxY	42T4455	R	*
3-pin (40 W, 20 V) adapter • models -CTO, xxA, xxB, xxC, xxG, xxH, xxK, xxM, xxP, xxQ, xxT, xxV	42T4449	R	*

Power cords

An IdeaPad power cord for a specific country or region is usually available only in that country or region:

Table 41. Parts list—2-pin power cords

Region	P/N		RoHS ID	CRU ID
Argentina • models -CTO, xxY	42T5105	42T5020	R	*
Canada, U.S. • models -CTO, xxF, xxL, xxS, xxU	42T5093	42T5008		
Japan • models -CTO, xxE, xxJ	42T5099	42T5014		

Table 42. Parts list—3-pin power cords

Region	P/N		RoHS ID	CRU ID
Australia • models -CTO, xxM	42T5135	42T5050	R	*
Bangladesh, South Africa, Sri Lanka • models -CTO, xxG	42T5141	42T5056		
Brazil • models -CTO, xxP	42T5296	42T5023		
Canada, U.S. • models -CTO, xxG, xxT	42T5089	42T5004		
China (P.R.C.) (other than Hong Kong S.A.R.) • models -CTO, xxC	42T5150	42T5065		
Denmark • models -CTO, xxG	42T5126	42T5041		
European countries • models -CTO, xxG	42T5114	42T5029		
India • models -CTO, xxQ	42T5168	42T5083		
Israel • models -CTO, xxG	42T5147	42T5062		
Italy • models -CTO, xxG	42T5132	42T5047		
Korea • models -CTO, xxK	42T5162	42T5077		
Switzerland • models -CTO, xxG	42T5129	42T5044		
Taiwan • models -CTO, xxV	42T5156	42T5071		
U.K., China (Hong Kong S.A.R.) • models -CTO, xxB, xxG, xxH	42T5120	42T5035		

Recovery discs

Windows XP Home DVDs for HDD

Windows XP Home for HDD is preinstalled as the operating system in the following models:

- 4068-CTO, 23x, 27x, 29x, 2Bx, 2Cx, 2Dx, 2Ex, 2Fx, 2Kx, 2Lx, 2Wx, 2Xx, 35x, 36x, 38x, 39x, 3Kx, 3Lx, 3Mx, 42x, 43x, 44x, 4Sx, 4Tx, 4Ux, 4Wx, 4Xx, 4Yx, 52x, 53x, 55x, 56x, 57x, A3x, A8x, AAx, AFx, AGx, AHx
- 4187-CTO, 29x, 2Ax, 2Bx, 2Cx, 2Dx, 2Ex, 2Nx, 2Px, 2Rx, 2Sx, 33x, 34x, 39x, 3Ax, 3Hx, 42x, 43x, 48x, 49x, 4Kx, 4Lx, 4Mx, 4Px, 52x, 53x, 54x, 5Lx, 5Mx, 5Nx, 5Px, 5Qx, 5Rx
- 4329-CTO, 2Ax, 2Bx, 2Cx, 2Dx, 2Qx, 2Rx, 2Sx
- 4333-CTO, 22x, 23x, 25x, 28x, 29x, 2Ax, 2Bx, 2Tx

Table 43. Parts list—Windows XP Home DVDs for HDD

Language	P/N	RoHS ID	CRU ID
Arabic	58Y1034	R	*
Brazilian Portuguese	58Y1035		
Czech	58Y1038		
Danish	58Y1039		
Dutch	58Y1050		
English	58Y1057		
Finnish	58Y1040		
French	58Y1041		
German	58Y1043		
Greek	58Y1042		
Hebrew	58Y1044		
Hungarian	58Y1046		
Italian	58Y1047		
Japanese	58Y1048		
Korean	58Y1049		
Norwegian	58Y1051		
Polish	58Y1052		
Russian	58Y1053		
Simplified Chinese	58Y1036		
Spanish	58Y1054		
Swedish	58Y1055		
Traditional Chinese	58Y1037		
Traditional Chinese (Hong Kong S.A.R.)	58Y1045		
Turkish	58Y1056		

Windows XP Home DVDs for SSD

Windows XP Homel for SSD is preinstalled as the operating system in the following models:

- 4068-CTO, 28x, 2Gx, 2Hx, 2Jx, 2Rx, 2Sx, 2Ux, 2Vx, 3Ex, 3Fx, 3Nx, 4Nx, 4Px, 4Qx, A4x, ADx
- 4187-CTO, 2Gx, 2Hx, 2Jx, 2Qx, 4Ex, 4Fx, 4Nx, 5Hx, 5Jx, 5Kx

Table 44. Parts list—Windows XP Home DVDs for SSD

Language	P/N	RoHS ID	CRU ID
Arabic	58Y0858	R	*
Brazilian Portuguese	58Y0859		
Czech	58Y0863		
Danish	58Y0864		
Dutch	58Y0865		
English	58Y0880		
Finnish	58Y0866		
French	58Y0867		
German	58Y0868		
Greek	58Y0869		
Hebrew	58Y0870		
Hungarian	58Y0871		
Italian	58Y0872		
Japanese	58Y1058		
Korean	58Y0874		
Norwegian	58Y0875		
Polish	58Y0876		
Russian	58Y0881		
Simplified Chinese	58Y0860		
Spanish	58Y0877		
Swedish	58Y0878		
Traditional Chinese	58Y0862		
Traditional Chinese (Hong Kong S.A.R.)	58Y0861		
Turkish	58Y0879		

SUSE Linux Enterprise Desktop 10 DVDs for HDD

SUSE Linux Enterprise Desktop 10 for HDD is preinstalled as the operating system in the following models:

- 4068-CTO, 24x, 2Ax, 2Nx, 2Px, 2Qx, 3Bx, 3Cx, 4Ax, 4Bx, 4Cx, 4Ex, 4Fx, 4Gx, 4Jx, 4Kx, 4Lx, A5x, A7x, A9x, ABx, AEx
- 4187-CTO, 27x, 2Kx, 2Lx, 2Mx, 37x, 3Dx, 3Jx, 4Bx, 4Cx, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx

Table 45. Parts list— SUSE Linux Enterprise Desktop 10 DVDs for HDD

Language	**P/N**	**RoHS ID**	**CRU ID**
All languages	58Y0003	R	*

SUSE Linux Enterprise Desktop 10 DVDs for SSD

SUSE Linux Enterprise Desktop 10 for SSD is preinstalled as the operating system in the following models:

- 4068-CTO, 22x, 2Tx, 32x, 33x, 3Hx, 3Jx, 46x, 47x, 48x, A2x, A6x, ACx
- 4187-CTO, 32x, 45x, 46x, 55x, 56x, 57x, DRx, ERx

Table 46. Parts list— SUSE Linux Enterprise Desktop 10 DVDs for SSD

Language	P/N	RoHS ID	CRU ID
Brazilian Portuguese, English, French, German, Italian, Spanish	58Y0000	R	*
Czech, Danish, Dutch, English, Finnish, Greek, Hungarian, Slovenian, Swedish, Polish, Russian, Turkish	58Y0001		
Japanese, Korean, Simplified Chinese, Traditional Chinese, Traditional Chinese (Hong Kong S.A.R.)	58Y0002		

Common service tools

Table 47. Parts list—Common service tools

Tool	P/N
Screwdriver kit	95F3598
1/4″ drive spinner handle	1650840
1/4″ Sq. to 1/4″ hex torx adapter	93F2838
TR7-TR-10 tamper resistant torx bits	00P6967
Removal tool antenna RF connector	08K7159
USB 2.0 CD-RW/DVD-ROM combo drive II	40Y8687
USB cable	40Y8704
USB floppy diskette drive	05K9283
USB floppy diskette drive tool kit	27L3452
Test card for integrated Smart Card	42W7820
CE Utility for IdeaPad S9e and S10e **Note:** Download the file from the following Web site: `http://www.lenovo.com/spm`	—

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